UNITED STATES DISTRICT COURT

FOR THE NORTHERN DISTRICT OF CALIFORNIA

SAN JOSE DIVISION

ACER, INC., ACER AMERICA CORPORATION AND GATEWAY, INC., PLAINTIFFS, VERSUS TECHNOLOGY PROPERTIES LTD., PATRIOT SCIENTIFIC CORPORATION, ALLIACENSE LTD., DEFENDANTS.	NO. CV-08-00877 PSG
HTC CORPORATION, HTC AMERICA, INC., PLAINTIFFS, VERSUS TECHNOLOGY PROPERTIES LTD., PATRIOT SCIENTIFIC CORPORATION, ALLIACENSE LTD., DEFENDANTS.	NO. CV-08-00882 PSG

NOVEMBER 30, 2012

TUTORIAL
CLAIMS CONSTRUCTION
MOTIONS

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TRANSCRIPT OF PROCEEDINGS
BEFORE THE HONORABLE PAUL S. GREWAL
UNITED STATES DISTRICT JUDGE

(APPEARANCES ON NEXT PAGE)

A-P-P-E-A-R-A-N-C-E-S:

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SAN JOSE, CALIFORNIA NOVEMBER 30, 2012

P-R-O-C-E-E-D-I-N-G-S

(WHEREUPON, COURT CONVENED AND THE FOLLOWING PROCEEDINGS WERE HAD:)

THE COURT: MR. RIVERA, WOULD YOU CALL THE MATTER SPECIALLY SET.

THE CLERK: YES, YOUR HONOR.

CALLING ACER, INC., ET AL. VERSUS TECHNOLOGY PROPERTIES LIMITED, ET AL., CASE NUMBER CV08-877, AND RELATED CASE CV 08-882. MATTER ON FOR TUTORIAL, CLAIMS CONSTRUCTION, AND PLAINTIFFS' AND DEFENDANTS' MOTION FOR RECONSIDERATION.

COUNSEL, PLEASE STATE YOUR APPEARANCES.

MR. OTTESON: JIM OTTESON OF AGILITY IP LAW REPRESENTING TPL AND ALLIACENSE.

I'M ACCOMPANIED BY BRANDON BAUM AND MICHELLE BREIT, MY PARTNERS.

MR. HOGE: CHARLIE HOGE FOR PATRIOT SCIENTIFIC CORPORATION.

THE COURT: ALL RIGHT. GOOD MORNING, COUNSEL.

MR. WALKER: TIMOTHY WALKER, KL GATES FOR ACER.

AND JOINING US A LITTLE LATE BECAUSE OF TRAFFIC WILL BE HAROLD DAVIS.

MS. KEEFE: GOOD MORNING, YOUR HONOR.

HEIDI KEEFE FROM COOLEY. WITH ME ARE MY PARTNERS MARK WEINSTEIN AND KYLE CHEN, REPRESENTING HTC.

THE COURT: GOOD MORNING.

MS. KEEFE: THANK YOU.

MR. OTTESON: I MIGHT ALSO JUST ADD, YOUR HONOR, THAT MY CLIENT IS HERE, DAN LECKRONE, WHO'S THE CHAIRMAN OF TPL. AND A WHOLE BUNCH OF OTHER PEOPLE ARE HERE FROM TPL TOO.

THE COURT: ALL RIGHT. WELL, WELCOME TO EVERYONE.

LET ME FIRST BEGIN BY SAYING I HAVE DONE MY VERY BEST TO CLIMB THE MOUNTAIN OF BRIEFING THAT HAS BEEN SUBMITTED. BOTH WITH RESPECT TO THE TERMS THAT WE'RE GOING TO BE TALKING ABOUT THIS MORNING, AND ALSO TO BETTER UNDERSTAND WHAT JUDGE WARE WAS ABLE TO PROVIDE WHILE THE CASE WAS PENDING BEFORE HIM.

I UNDERSTAND THIS CASE HAS HAD A HISTORY AND TRACK RECORD THAT GOES BACK WELL BEFORE JUDGE WARE. SO, I HAVE DONE MY VERY BEST TO UNDERSTAND THAT HISTORY AND CONTEXT. I FIND IT OFTEN HELPFUL IN WORKING THROUGH THE TERMS THAT I HAVE BEFORE ME.

I WOULD PROPOSE THAT WE STRUCTURE TODAY'S CONVERSATION AS FOLLOWS: AS I UNDERSTAND IT, AND OBVIOUSLY I'M OPEN TO CORRECTION, I HAVE FIVE TERMS BEFORE ME. TWO WHICH ARE THE SUBJECT OF SUPPLEMENTAL CONSTRUCTION REQUESTS, AND THREE WHICH ARE THE SUBJECT OF THE MOTIONS FOR RECONSIDERATION.

WITH THOSE FIVE TERMS, IT'S MY EXPERIENCE THAT TO MAKE THE MOST EFFICIENT USE OF OUR TIME BY JUST TAKING ONE TERM AT A TIME AND HEARING ARGUMENT BACK AND FORTH BETWEEN THE SIDES. I'LL EVEN LET YOU ALL TAKE TURNS PICKING WHICH TERM WE

TURN TO NEXT, AND WHO GOES FIRST, SO THAT NOBODY FEELS THAT THEY ARE BEING PUT UPON UNFAIRLY BY MYSELF.

IF THAT'S ACCEPTABLE TO THE ATTORNEYS, I WOULD PROPOSE TO PROCEED IN THAT MANNER.

MS. KEEFE: WE'VE ACTUALLY ALREADY TALKED ABOUT IT THIS MORNING, AND THAT WAS EXACTLY WHAT WE WERE GOING TO PROPOSE TO DO, AFTER THE TUTORIAL.

MR. OTTESON: YES. I THINK WE'VE ALSO EACH PREPARED BRIEF TUTORIALS.

THE COURT: YES.

MR. OTTESON: IF YOU'D LIKE TO SEE THOSE?

THE COURT: YES, I WOULD. ABSOLUTELY.

MR. OTTESON: SO MAYBE WE CAN DO THOSE, AND THEN WE'LL GO EXACTLY ACCORDING TO YOUR SUGGESTION.

THE COURT: OKAY. ALL RIGHT.

WELL, IF THAT WORKS FOR YOU ALL, THAT WORKS FOR ME. AND I DID WANT, I OBVIOUSLY NEGLECTED TO POINT OUT THE TUTORIALS, WHICH I'D VERY MUCH LIKE TO HEAR.

ORDINARILY I HEAR FROM THE PATENTEES FIRST ON THE TUTORIAL. SO, MR. OTTESON, YOU WANT TO BEGIN?

MR. OTTESON: ABSOLUTELY. THANK YOU, JUDGE.

OKAY. YOUR HONOR, WE HAVE SOME BENCH BOOKS TOO THAT HAVE NOT ONLY THE TUTORIAL SLIDES, IT SAYS "TUTORIAL" ON THE COVER, BUT IT HAS EVERYTHING.

THE COURT: OKAY.

MR. OTTESON: IT'S TABBED OUT.

THE COURT: UNDERSTOOD.

MR. OTTESON: I'LL GIVE ONE OF THOSE TO YOU. OR A COUPLE, I GUESS.

ALL RIGHT. THANK YOU, YOUR HONOR. GOOD MORNING.

THE COURT: GOOD MORNING.

MR. OTTESON: I'M GLAD TO BE HERE THIS MORNING TO TALK ABOUT THE, WHAT WE REFER TO ON THE DEFENDANTS' SIDE, THE PATENTEE SIDE, AS THE MMP PORTFOLIO. AND MMP STANDS FOR MOORE MICROPROCESSOR PORTFOLIO.

THESE ARE PATENTS THAT WERE DEVELOPED BY CHUCK MOORE AND RUSSELL FISH BACK IN THE LATE '80'S. AND AT THAT TIME THEY RECOGNIZED THAT THERE WERE A NUMBER OF PROBLEMS WITH TRADITIONAL MICROPROCESSOR DESIGN. AND THEY DEVELOPED A MICROPROCESSOR CALLED SHBOOM, WHICH ACTUALLY GOT A LOT OF RECOGNITION IN TERMS OF HAVING SOME NOVEL AND REVOLUTIONARY FEATURES ABOUT MICROPROCESSOR ARCHITECTURE.

AND, YOU KNOW, WE DON'T NEED TO GET INTO ALL THE ACCOLADES THAT THEY RECEIVED, BUT THEY OBVIOUSLY GOT SOME.

SO, THE PATENTS WE'RE TALKING ABOUT TODAY, THERE ARE THREE THAT WE WILL BE TALKING ABOUT TODAY. AND THERE ARE ACTUALLY FOUR AT ISSUE IN THIS CASE, BUT WE'LL TALK ABOUT TERMS FROM THREE OF THOSE.

AND ALL OF THE PATENTS, THE GENESIS OF ALL OF THEM WAS AN APPLICATION THAT WAS FILED AUGUST 1989, AND IT WAS A

VERY COMPREHENSIVE APPLICATION.

THE FOUR PATENTS THAT ARE IN-SUIT BEFORE YOUR HONOR HAVE ACTUALLY BEEN RE-EXAMINED A TOTAL OF 16 TIMES. AND BEEN SUBJECTED TO UPWARDS OF 900 PRIOR ART REFERENCES. SO, THEY HAVE BEEN AROUND FOR A WHILE. YOU KNOW, THEY'VE BEEN VETTED A LOT. I MEAN, ALL THESE RE-EXAMINATIONS, OBVIOUSLY THEY WERE ALSO BEFORE JUDGE WARD IN THE EASTERN DISTRICT OF TEXAS, JUDGE FOGEL, JUDGE WARE, AND NOW YOURSELF.

SO, THERE ARE MANY LICENSEES. AND YOU'LL RECOGNIZE, I'M SURE, A LOT OF THESE GLOBAL FIRMS THAT ARE LICENSEES OF THE MMP PORTFOLIO.

SO, LIKE I SAID, THEY ALL STEM FROM THE SAME APPLICATION, WHICH THE EXAMINER RECOGNIZED ACTUALLY HAD MANY DIFFERENT INVENTIONS IN IT, UPWARDS OF 10. AND SO THERE WAS A RESTRICTION REQUIREMENT AND THEY WERE SEPARATED INTO A BUNCH OF DIFFERENT APPLICATIONS.

AND OF THOSE, WE HAVE, YOU KNOW, THE FOUR THAT ARE PATENTS-IN-SUIT. THE ONLY ONE THAT WE'RE REALLY NOT GOING TO TALK TOO MUCH ABOUT TODAY IS THE '148 PATENT. BECAUSE IT DOESN'T HAVE ANY CLAIMS OR CLAIM TERMS THAT YOUR HONOR IS EITHER RECONSIDERING OR LOOKING FURTHER AT.

SO LET'S TALK FIRST ABOUT THE '336 PATENT. THIS IS A PATENT THAT, WHERE THE INVENTORS RECOGNIZED THE FUNDAMENTAL PROBLEM WITH PRIOR ART, WHICH WAS YOU HAVE TO HAVE A CLOCK, A CLOCK SIGNAL TO BASICALLY TIME ALL THE FUNCTIONS THAT A CHIP

DOES, THE CPU IN PARTICULAR. AND, ALSO, YOU NEED A CLOCK SIGNAL FOR INPUT OUTPUT FUNCTIONS FOR THE CHIP.

AND WHAT THE INVENTORS RECOGNIZED WAS THAT YOU COULD REALLY SPEED UP THE CPU BY DECOUPLING THE CLOCKS THAT, THE CLOCK SIGNALS THAT ARE USED TO TIME THE I/O FUNCTIONALITY AS OPPOSED TO THE CPU FUNCTIONALITY. BECAUSE THE CPU, ALL THOSE LITTLE DEVICES, ALL THOSE LITTLE TRANSISTORS ON THE CHIP CAN RUN VERY FAST UNDER GOOD CONDITIONS. BUT THE I/O, THE I/O CIRCUITRY BY ITS NATURE, RUNS MORE SLOWLY BECAUSE YOU'RE INTERFACING WITH EXTERNAL MEMORY OFTENTIMES.

SO, THE INVENTION OF THE '336 WAS REALLY TO DECOUPLE THOSE TWO CLOCKS. AND WHAT THEY DID WAS THEY CAME UP WITH -- WHEREAS, WHEREAS BEFORE IN THE PRIOR ART, THE PRIMARY WAY THAT YOU COULD GET A CLOCK WAS TO HAVE AN EXTERNAL CRYSTAL THAT PROVIDED A CONSTANT PULSE; YOU KNOW, THE TICK TOCK, TICK TOCK THAT THE CHIP WOULD THEN USE FOR THE TIMING OF ALL ITS FUNCTIONS. AND WHAT THE INVENTORS REALIZED WAS HEY, WHY DON'T WE CREATE A CLOCK ON THE SAME PIECE OF SILICON AS THE CPU CIRCUITRY.

AND SO, IN THAT CASE, YOU COULD HAVE A CLOCK THAT POTENTIALLY COULD GO FASTER UNDER GOOD CONDITIONS, ALONG WITH THE CIRCUITRY OF THE CPU, OR UNDER POOR CONDITIONS LIKE, FOR EXAMPLE, WHEN A CHIP IS HOT, THE CIRCUITRY DOESN'T RUN AS WELL, AND THEN THE ON-CHIP CLOCK WILL ALSO GO MORE SLOWLY.

AND SO IT WAS THE IDEA OF THIS RING OSCILLATOR

CIRCUITRY TO USE AS A CLOCK TO TIME THE FUNCTIONS OF THE CPU, THAT WAS REALLY THE INVENTION. ALONG WITH HAVING A SEPARATE SECOND CLOCK TO TIME THE FUNCTIONS OF THE I/O.

SO HERE, IN THE SPECIFICATION OF THE '336 PATENT, THIS IS COLUMN 16, YOU COULD SEE IT SAYS "TRADITIONAL CPU DESIGNS ARE DONE SO THAT WITH THE WORST CASE OF THE THREE PARAMETERS, THE CIRCUIT WILL FUNCTION AT THE RATED CLOCK SPEED."

AND WHAT THE SPECIFICATION TALKS ABOUT IS THAT WHEN YOU HAVE A SILICON CHIP, AS YOU KNOW IS OFTEN AS SMALL AS A FINGERNAIL OR SOMETIMES SMALLER, YOU, THE FUNCTIONS OF THE CIRCUITRY IN THAT CHIP WILL VARY, AND THE PERFORMANCE OF THE CIRCUITS WILL VARY DEPENDING ON SEVERAL PARAMETERS; TEMPERATURE, FOR EXAMPLE, VOLTAGE, AND ALSO SEMICONDUCTOR PROCESSING DIFFERENCES.

SO, YOU KNOW, YOU HAVE A 10 OR 12-INCH WAFER THAT MAY HAVE SEVERAL THOUSAND DIE ON IT. AND THERE ARE VARIATIONS IN QUALITY OF THOSE. AND THEY ACTUALLY, YOU KNOW, TAKE SOME THAT THEY KNOW ARE GOING TO BE SLOWER, AND THEY DO WHAT THEY CALL "BINNING" AND THROW THEM IN A BIN THAT ARE GOING TO BE RATED FOR SMALLER MICROPROCESSOR CHIPS; AND TAKE OTHERS THAT ARE GOING TO BE FASTER AND PUT THEM IN A DIFFERENT BIN.

BUT THE POINT IS ON AN INDIVIDUAL DIE, THE CLOCK CIRCUITRY, THE RING OSCILLATOR IS ON THAT SAME PIECE OF SILICON AS THE CPU CIRCUITRY. AND SO, TO THE EXTENT THERE ARE

VARIATIONS AS A RESULT OF SEMICONDUCTOR PROCESSING, THEY'RE SHARED BY THE CIRCUITRY OF THE RING OSCILLATOR AND THE CPU.

THE SAME WITH TEMPERATURE AND VOLTAGE, BECAUSE THEY'RE ON THE SAME DIE, THEY VARY TOGETHER.

SO, HERE WE SEE, IT ALSO SAYS "THE RESULTS ARE DESIGNS THAT MUST BE CLOCKED A FACTOR OF TWO SLOWER THAN THEIR MAXIMUM THEORETICAL PERFORMANCE, SO THAT THEY WILL OPERATE PROPERLY IN THE WORST CASE CONDITIONS." AND SO, AGAIN, THIS IS TALKING ABOUT THE PRIOR ART.

SO, IN THIS EXAMPLE, YOU CAN SEE WE HAVE WORST CASE CONDITIONS; IT'S HOT. NOW, THE MICROPROCESSOR CHIP, THE DIE ITSELF IS REPRESENTED BY THIS RED BOX; WHERE IT SAYS MICROPROCESSOR CHIP. SO THIS IS THE PRIOR ART WAY OF DOING IT. IT'S CLOCKED, THE FUNCTIONS OF IT ARE CLOCKED BY THIS OFF-CHIP CRYSTAL CLOCK THAT PROVIDES THIS CONSTANT PULSE REPRESENTED BY THE ORANGE BALL.

AND YOU CAN SEE THAT THE ORANGE BALL, YOU KNOW, THE WAY WE REPRESENTED IT, IT'S GOING AROUND THE PERIMETER, THE SAME RATE AS THE ORANGE BALL IS GOING AROUND THE PERIMETER OF THE CHIP. SO IT'S PROVIDING THE CLOCK SIGNAL.

NOW, THE PURPLE BALL, HOWEVER, REPRESENTS BASICALLY THE POTENTIAL SPEED OF THE CIRCUITRY ON THE CHIP. SO, AGAIN, THIS IS WORSE CASE SCENARIO; IT'S HOT. THE CIRCUITRY IS GOING TO GO SLOW. YOU SEE, YOU HAVE TO PLAN FOR A CLOCK THAT'S GOING TO GO SLOW IN THE WORST CASE CONDITIONS.

LET'S GO TO THE NEXT --

THE COURT: IF I COULD STOP YOU THERE.

MR. OTTESON: YEP.

THE COURT: I TAKE IT THAT ONE PROBLEM THAT THE PATENT IDENTIFIES WITH THIS PARTICULAR STRUCTURE ARCHITECTURE, IS THAT BY LIMITING THE OFF-CHIP CRYSTAL CLOCK RATE, SO AS TO ACCOMMODATE WHAT THE CPU IS EXPOSED TO, YOU ARE NECESSARILY SLOWING THE CLOCK WITH RESPECT TO I/O OR WITH RESPECT TO ANY OTHER PURPOSES.

MR. OTTESON: YOU GOT IT; I/O, YOU KNOW, THE MATH FUNCTIONS, OF ARITHMETIC LOGIC UNIT, EVERYTHING THAT THE CPU DOES IS ALSO GOING TO BE SLOWED AS A RESULT OF HAVING THIS CONSTANT CLOCK SIGNAL FROM A CRYSTAL THAT IS BASICALLY SET.

SO, AND THAT'S REALLY ILLUSTRATED BY THIS NEXT, BY THIS NEXT SLIDE HERE IN THE ANIMATION. YOU CAN SEE HERE NOW THE PURPLE BALL REPRESENTS THE POTENTIAL SPEED OF THE CPU CIRCUITRY, BUT IT'S ONLY POTENTIAL. BECAUSE THAT CIRCUITRY CAN'T EXECUTE FASTER THAN THE CLOCK FUNCTION. SO IT'S STILL LIMITED BY THE ORANGE, THE SPEED OF THE ORANGE BALL EVEN THOUGH IT COULD POTENTIALLY GO FASTER. SO THAT WAS REALLY THE IDEA BEHIND THE INVENTION.

LET'S GO TO THE NEXT SLIDE, PLEASE.

SO, MOORE AND FISH CAME UP WITH THIS ON-CHIP SYSTEM CLOCK. AND YOU SEE IN COLUMN 16 OF THE PATENT IT SAYS, "THE PATENT DISCLOSES A MICROPROCESSOR EMBODIMENT WHERE THE CLOCK IS

FABRICATED ON THE SAME SILICON CHIP AS THE REST OF THE MICROPROCESSOR." AND IT DESCRIBES WHAT THAT CLOCK CIRCUIT IS.

IT SAYS, "THE CLOCK CIRCUIT IS THE FAMILIAR RING OSCILLATOR." IT ALSO SAYS, "THE RING OSCILLATOR IS USEFUL AS A SYSTEM CLOCK BECAUSE ITS PERFORMANCE TRACKS THE PARAMETERS WHICH SIMILARLY AFFECT ALL OTHER TRANSISTORS ON THIS SAME SILICON DIE."

THOSE BEING SEMI-CONDUCTOR PROCESSING VARIATIONS; TEMPERATURE AND VOLTAGE, FOR EXAMPLE.

THE COURT: AND SO THE TRICK, AS IT WERE, WAS TO UTILIZE THE RING OSCILLATOR COMING FROM THE SAME DIE; IS THAT FACT WHAT ALLOWS IT TO BASICALLY HAVE THE SAME PERFORMANCE OR TRACK THE SAME PERFORMANCE AS OTHER TRANSISTORS?

MR. OTTESON: YEAH, BASICALLY THAT IS A FUNCTION OF PHYSICS. BECAUSE THEY'RE ON THE SAME SILICON DIE, THE CHIP, THE MICROPROCESSOR HAS THE ABILITY THEN TO GO FASTER UNDER GOOD CONDITIONS. AND, YOU KNOW, THE CLOCK THEN WILL ALSO GO SLOWER UNDER POORER CONDITIONS. AND IT'S JUST, YOU KNOW, ESSENTIALLY THE PHYSICS THAT ARE LITERALLY BAKED INTO THAT SILICON CHIP, HAVING THE RING OSCILLATOR AND CPU ON THE SAME DIE.

THE COURT: AND THE POINT, I TAKE IT, IS THAT BECAUSE IT'S "ON-CHIP" THE CONDITIONS TO WHICH IT'S EXPOSED ARE IDENTICAL OR NEAR IDENTICAL TO THE CONDITIONS OF THE CPU.

MR. OTTESON: EXACTLY. THAT'S EXACTLY RIGHT.

LET'S GO TO THE NEXT SLIDE. I THINK WE HAVE

ANOTHER ANIMATION HERE.

OKAY. WELL, BEFORE WE GET TO THE OTHER ANIMATION, SO OBVIOUSLY, "RING OSCILLATOR" IS AN IMPORTANT TERM THAT WE'RE GOING TO BE TALKING ABOUT TODAY. AND WHAT WE HAVE UP ON THE SCREEN IS JUDGE WARE'S CONSTRUCTION OF THE TERM.

"INTERCONNECTED ELECTRONIC COMPONENTS COMPRISING MULTIPLE ODD NUMBERS OF INVERTERS ARRANGED IN A LOOP." AND WE AGREE WITH THAT. WE AGREE WITH THAT CONSTRUCTION.

SO RING OSCILLATOR HAS TO HAVE CIRCUITRY THAT INVERTS THE INVERTED, OR THE INPUT VALUE AT LEAST THREE TIMES, ARRANGED IN A LOOP. AND I'LL EXPLAIN TO YOU WHY IT HAS TO BE AT LEAST THREE TIMES, OR WHY YOU HAVE TO HAVE AN ODD NUMBER IN A MOMENT.

BUT BASICALLY WHAT THE INVERTER DOES, AND WE'LL SEE THIS, IS IT CHANGES A 1 FROM A 0; OR IF A 0 COMES IN, IT CHANGES IT FROM A 0 TO 1. AND IF YOU HAVE THOSE ARRANGED IN A LOOP, YOUR -- AND IN AN ODD NUMBER, IF YOU HAVE A SAMPLING POINT, TO GET YOUR CLOCK SIGNAL FROM ON A SPECIFIC POINT ON THAT LOOP, EVERY TIME THE SIGNAL COMES BY IT'S GOING TO BE DIFFERENT. SO YOU GET HI/LOW, HI/LOW, 1 - 0, 1 - 0.

THE COURT: UH-HUH.

MR. OTTESON: SO THIS IS A BASIC TYPE OF CLOCK THAT THE INVERTERS IN THE '336 PATENT SAID THAT THEY WERE GOING TO USE FOR THEIR CLOCK, OR RING OSCILLATOR.

THERE ARE OTHER OSCILLATORS TOO THAT CAN BE USED TO

GENERATE A CLOCK SIGNAL. AND WE'RE GOING TO BE TALKING ABOUT THAT AS WELL.

SO, THIS IS FIGURE 18 FROM THE PATENT. AND WE'VE ANIMATED IT TO SHOW HOW THE INVERTERS WORK. AND SO IF YOU LOOK AT PHASE 1 HERE, THAT REPRESENTS A POINT ON THE LOOP WHERE YOU MIGHT BE SAMPLING THE CLOCK SIGNAL.

SO HERE WE SEE AT PHASE 1, WHEN IT GOES THROUGH, IT'S A 1. BUT THERE ARE SEVEN INVERTERS HERE, ODD NUMBER, AND SO WE'LL SEE WHEN IT COMES BACK BY, IT'S A 0.

AND SO YOU GET THIS OSCILLATING SIGNAL REPRESENTED BY THIS SQUARE SIGN WAVE AT THE BOTTOM TOO. AND SO THAT CAN BE USED TO CLOCK THE FUNCTIONS OF THE CHIP. OKAY.

THE COURT: IS THERE ANY SCENARIO -- AS I WAS READING THE SPECIFICATION, I WAS STRUGGLING WITH THIS, IT SEEMS, AT LEAST IN THIS CONTEXT, COMMON SENSE TO HAVE AN ODD NUMBER OF INVERTERS.

MR. OTTESON: YEAH.

THE COURT: IS THERE ANY SCENARIO WHERE YOU WOULD WANT TO HAVE AN EVEN NUMBER?

I KNOW WE'RE A LITTLE OFF POINT, BUT I'M JUST TRYING TO FIGURE OUT WHAT THE SIGNIFICANCE OF THAT WOULD BE.

MR. OTTESON: WELL, IT DOESN'T SEEM TO MAKE SENSE TO ME. AND, WE KIND OF MAPPED THIS OUT ON A WHITE BOARD, AND YOU CAN SEE THAT AS THE SIGNAL GOES AROUND, IF YOU HAVE AN EVEN NUMBER OF INVERTERS, IT'LL STICK ON 1, AT YOUR SAMPLING POINT,

AND THEN WHEN IT GETS BACK THERE IT WILL BE 1 AGAIN.

THE COURT: RIGHT.

MR. OTTESON: AND SO AS FAR AS A CLOCK SIGNAL, IT'S USELESS. BECAUSE IT'S ALL, YOU KNOW, YOU DON'T GET THE PULSING.

THE COURT: AND PERHAPS THAT'S THE POINT, THE OBJECTIVE HERE IS TO DEVELOP A SIGNAL FOR PURPOSES OF CLOCKING THE FUNCTIONS, SO YOU NEED TO HAVE IT GO AROUND THAT WAY.

MR. OTTESON: RIGHT. THAT'S WHY YOU HAVE TO HAVE AN ODD NUMBER.

THE COURT: OKAY.

MR. OTTESON: SO IT CHANGES EVERY TIME IT COMES AROUND THE LOOP. THAT'S RIGHT.

SO WE'VE TALKED ABOUT -- THIS A LITTLE BIT OF A REVIEW HERE. SO THE OSCILLATORS VARY DUE TO WHAT WE CALL "PVT", OR ONE OR MORE OF SEMICONDUCTOR PROCESS, VOLTAGE AND TEMPERATURE.

AND, AGAIN, BECAUSE I THINK YOU'RE ALREADY CLEARLY UNDERSTANDING THIS, "SINCE THE CPU AND THE ON-CHIP OSCILLATOR ARE ON THE SAME INTEGRATED CIRCUIT THEY'RE GOING TO BE SIMILARLY AFFECTED BY PROCESS, VOLTAGE AND TEMPERATURE VARIATIONS."

SO HERE'S THE INVENTION. AND, AGAIN, WE'RE LOOKING AT BAD CONDITIONS; IT'S HOT. AND WE SEE THAT THE SPEED OF THE RING OSCILLATOR VARIES SIMILARLY WITH THE POTENTIAL SPEED OF

THE CPU. AND SO, YOU KNOW, EVERYTHING IS FINE.

I SHOULD ALSO POINT OUT THAT THE RED BOX, OR L-SHAPED BOX AROUND THIS REPRESENTS THE MICROPROCESSOR CHIP. THE THINGS OUTSIDE OF THAT WOULD BE OFF OF THE CHIP.

SO HERE WE'VE GOT A SITUATION WHERE, BECAUSE THE CONDITIONS ARE BETTER, THE CHIP IS COOLER, THE CLOCK CAN GO FASTER, AND SO CAN THE CIRCUITRY OF THE CPU.

THE COURT: UH-HUH.

MR. OTTESON: SO LET'S GO TO THE NEXT -- OKAY. I THINK WE HAVE TO GO TO THE NEXT SLIDE. THERE WE GO.

SO GO AHEAD AND PLAY THIS ONE.

ALL RIGHT. SO, HERE AGAIN, YOU'VE GOT THE CPU BEING CLOCKED BY THE RING OSCILLATOR. WHICH YOU CAN SEE IS GOING FAIRLY QUICKLY IN THE EXAMPLE. AND IT'S GOING FAIRLY QUICKLY RELATIVE TO THE SLOWER SPEED OF THE I/O FUNCTIONALITY, AND THAT'S BY NECESSITY.

THE I/O FUNCTIONS CAN'T GO AS FAST BECAUSE YOU'RE PULLING STUFF OFF AN EXTERNAL MEMORY BUS, OR SENDING IT TO AN EXTERNAL MEMORY BUS.

THE COURT: RIGHT.

MR. OTTESON: SO BY DECOUPLING THESE TWO CLOCKS YOU CAN ACTUALLY DRASTICALLY IMPROVE THE PERFORMANCE OF THE CPU. BECAUSE YOU DON'T HAVE TO HAVE ONE CLOCK THAT CONTROLS THE SPEED OF EVERYTHING AND SLOWS IT DOWN.

LET'S GO BACK TO THE NEXT -- LET'S GO BACK AND HIT

THE NEXT ANIMATION THERE.

SO HERE, YOU KNOW, YOU HAVE BETTER CONDITIONS. AND THE CPU AND RING OSCILLATOR, BECAUSE THEY'RE ON THE SAME PIECE OF SILICON, HAVE THE POTENTIAL TO GO EVEN FASTER.

AND, YOU KNOW, THE CRYSTAL IS STILL PLOTTING ALONG TO PERFORM YOUR I/O FUNCTIONS.

OKAY. SO THAT'S KIND OF THE BACKGROUND ON THE '336. AND WE'LL COME BACK TO THAT IN THE CONTEXT OF THE ARGUMENT ON THE MEANING OF RING OSCILLATOR.

THE COURT: CAN I JUST ASK YOU ON THAT POINT. SO IS IT CORRECT, IN YOUR VIEW, FOR ME TO FOCUS MY EFFORTS ON THE RING OSCILLATOR ALONE, AND BE AGNOSTIC AS TO WHETHER THE SECOND CLOCK, AS YOU DESCRIBED IT HERE, OF SOME OTHER SYSTEM, IN OTHER WORDS, AS I UNDERSTAND THE POINT OF THE '336, IT WAS TO BASICALLY MOVE OR ADOPT THE STRUCTURE OF MULTIPLE CLOCKS, AT LEAST TWO CLOCKS.

MR. OTTESON: YES.

THE COURT: RATHER THAN ONE. AND TO MOVE THE CPU CLOCK ONTO THE CHIP.

MR. OTTESON: THAT IS CORRECT.

THE COURT: OKAY.

MR. OTTESON: THAT IS CORRECT.

THE COURT: OKAY. AND LEAVE TO SOME EXTERNAL OR SECOND OR MORE CLOCK THE PURPOSE OR RESPONSIBILITY FOR PROVIDING THE CLOCKING FUNCTIONS FOR THE I/O, OR ANYTHING ELSE

THAT MIGHT BE USED.

MR. OTTESON: THAT'S EXACTLY RIGHT, JUDGE. THAT'S HOW THE CLAIMS WERE WRITTEN.

NOW, THERE WERE ALSO PREVIOUS DISPUTES ABOUT WHAT ASYNCHRONOUS MEANT, IN TERMS OF THE FUNCTION OF THE TWO DIFFERENT CLOCKS.

THE COURT: RIGHT. BUT THAT'S NOT MY PROBLEM.

MR. OTTESON: THAT'S NOT YOUR PROBLEM TODAY.

A LOT OF THAT HAS BEEN RESOLVED. AND A LOT OF THAT IS NOW GOING TO BE RESOLVED IN THE CONTEXT OF THE INFRINGEMENT ARGUMENT. BUT WE DON'T HAVE TO GET THERE TODAY.

THE COURT: OKAY.

MR. OTTESON: SO FOR THE '749 PATENT, WHICH AGAIN HAS BASICALLY THE SAME SPECIFICATION, WITH A SLIGHT PAGINATION CHANGES AS THE '336, IT'S TALKING ABOUT THE FACT THAT YOU HAVE THIS PROBLEM WHERE, AGAIN, THE CPU WANTS TO RUN FAST. BUT YOU'RE TRYING TO PULL INSTRUCTIONS AND DATA OFF AN EXTERNAL BUS, AND AS THE CPU IS EXECUTING INSTRUCTIONS, YOU KNOW, IT'S SITTING THERE WAITING. IT'S GOING OKAY, COME ON, GIVE ME SOME MORE INSTRUCTIONS TO EXECUTE.

AND SO THE IDEA FOR THIS, FOR THE '749 PATENT, THIS PART OF THE MICROPROCESSOR ARCHITECTURE THAT MOORE AND FISH CAME UP WITH, WAS TO FETCH MULTIPLE INSTRUCTIONS AT A TIME, AND SUPPLY THEM TO THE CPU INSTRUCTION REGISTER IN PARALLEL DURING THE SAME MEMORY CYCLE IN WHICH THEY ARE FETCHED.

SO, AGAIN, SINCE MEMORY IS SLOWER, YOU KNOW, THE I/O FUNCTIONALITY AND GETTING STUFF TO AND FROM THE MEMORY IS SLOWER THAN HOW THE CPU EXECUTES AND ALLOWS YOU, IF YOU GET MULTIPLE INSTRUCTIONS AT A TIME, IT ALLOWS THE CPU TO EXECUTE THEM SEQUENTIALLY, AND IT SPEEDS UP YOUR CPU. KIND OF LIKE --

THE COURT: HOW DO YOU SQUARE -- AND I JUST STRUGGLED WITH THIS LAST NIGHT AS I WAS READING THE PAPERS -- HOW DO YOU SQUARE THE NOTION OF SEQUENTIAL INSTRUCTIONS OR SEQUENTIAL ORDERING WITH SUPPLYING THE INSTRUCTIONS IN PARALLEL? CAN YOU JUST WALK ME THROUGH THAT.

MR. OTTESON: YES. THAT'S AN EXCELLENT QUESTION. LET'S GO AHEAD AND GO TO THE NEXT SLIDE. AND WE HAVE AN ANIMATION HERE THAT'S GOING TO ILLUSTRATE THAT.

BUT BEFORE YOU HIT THE PLAY BUTTON, LET ME JUST KIND OF SET THIS UP. THIS IS FIGURE 4 OF THE '749 PATENT. AND THIS IS, YOU KNOW, A VERY HIGH LEVEL ARCHITECTURAL DIAGRAM TO SHOW SOME OF THE THINGS OF INTEREST ABOUT THE ARCHITECTURE.

NOW, DOWN HERE IS OFF-CHIP. SO YOU'RE GETTING -- GENERALLY, I MEAN IN THIS EXAMPLE IT'S OFF-CHIP -- YOU'VE GOT INSTRUCTIONS FOR THE MICROPROCESSOR TO EXECUTE DATA AND OTHER THINGS THAT COME IN ON THIS BUS.

YOU SEE THIS IS A 32-BIT WIDE BUS. SO IT COMES IN THROUGH THE MEMORY CONTROLLER, AND THEN WITHIN THE CHIP ITSELF, YOU'VE GOT AN INTERNAL BUS THAT IS 32-BITS WIDE TOO. AND SO UP HERE 108 IS LABELED IN THE SPECIFICATION AS THE "INSTRUCTION

REGISTER." AND IT'S A 32-BIT WIDE REGISTER, IN THIS EXAMPLE.

AND SO YOU SEE IN THIS EXAMPLE, THIS IS CONTEMPLATING THAT YOU'RE GOING TO HAVE FOUR INSTRUCTIONS THAT ARE, EACH OF WHICH IS 8 BITS WIDE, OR ONE BYTE.

THE COURT: RIGHT.

MR. OTTESON: SO WHY DON'T WE GO AHEAD AND RUN IT. AND THEN I'M GOING TO ADDRESS YOUR QUESTION, BECAUSE I THINK IT'S A REALLY IMPORTANT CONCEPT TO UNDERSTAND.

SO HERE WE HAVE 32 BITS COMING IN; BLUE, RED, GREEN AND ORANGE. AND YOU SEE THAT EACH OF THOSE IS ITS OWN INSTRUCTION. AND THEY GO INTO THE VARIOUS SLOTS IN THE INSTRUCTION REGISTER.

NOW, OBVIOUSLY, THOSE OF US WHO HAD ANY COMPUTER PROGRAMING AT ALL, AND I TOOK IT A VERY LONG TIME AGO -- IN FACT, MY FIRST CLASS IN COLLEGE, YOU KNOW, THE PROFESSOR MADE US USE PUNCH CARDS; WHICH WAS THE MOST IRRITATING THING.

THE COURT: YOU'RE NOT THAT OLD, COUNSEL.

MR. OTTESON: WELL, YEAH, ACTUALLY, I'M NOT THAT OLD. BUT THEY, IN MY FIRST COURSE --

THE COURT: IS THIS A HISTORICAL COURSE?

MR. OTTESON: WELL, THEY MADE US USE THEM BECAUSE THEY WANTED TO PUT US THROUGH THE PAIN OF DOING IT.

THE COURT: NEXT YOU'LL BE TELLING ME YOU USED SLIDE RULES TOO.

MR. OTTESON: NO, I NEVER LEARNED HOW TO DO THAT.

I THINK MY CLIENTS ARE CHUCKLING BECAUSE THEY KNOW HOW TO DO IT.

THE COURT: I BET THEY DID.

MR. OTTESON: BUT THE POINT OF THE PROFESSOR MAKING US DO THAT FOR OUR FIRST ASSIGNMENT IN COMPUTER SCIENCE WAS IT REALLY HAMMERS HOME THE FACT THAT INSTRUCTIONS ARE SEQUENTIAL; THE CPU EXECUTES ONE AT A TIME.

AND SO WHAT HAPPENS IS YOU PULL MULTIPLE SEQUENTIAL INSTRUCTIONS OFF OF, OUT OF MEMORY, PUT THEM IN THE INSTRUCTION REGISTER, BUT THEY CAN'T BE EXECUTED IN PARALLEL. THEY'RE STILL EXECUTED ONE AT A TIME. BUT YOU HAVE A --

THE COURT: AND PERHAPS MORE PRECISELY, ALTHOUGH I KNOW THAT THE LANGUAGE OF THE PATENTS IS "ONE AT A TIME" OR THE ARGUMENT IS ONE AT A TIME, IT'S ONE AFTER ANOTHER.

MR. OTTESON: YES. IT'S ONE AFTER ANOTHER, IN SEQUENCE. THAT'S RIGHT.

SO, THE POINT IS THERE'S AN INSTRUCTION REGISTER THAT CAN HOLD MULTIPLE SEQUENTIAL INSTRUCTIONS THAT THEN ARE GOING TO BE EXECUTED ONE AT A TIME.

THE COURT: OKAY.

MR. OTTESON: THAT'S RIGHT. OR IN SEQUENCE, CORRECT.

SO, WITH THE '749 PATENT, IT'S IMPORTANT TO UNDERSTAND THAT THERE'S A TERM "INSTRUCTION REGISTER" WHICH DIDN'T APPEAR IN THE PATENT FOR MANY, MANY YEARS. IN FACT, IT

DIDN'T REALLY APPEAR UNTIL A RE-EXAMINATION IN, I BELIEVE, 2011. AND WAS ADDED TO ONE OF THE CLAIMS.

AND WHAT WE'RE TALKING ABOUT WITH AN "INSTRUCTION REGISTER" AND THAT'S AGAIN, THIS 108, WE'RE TALKING ABOUT THE EGG CARTON. YOU KNOW, IT'S A STRUCTURE THAT HOLDS THE BITS OF, OF THE INSTRUCTIONS.

WE'RE NOT TALKING ABOUT THE INSTRUCTIONS THEMSELVES. THOSE ARE THE 1'S AND 0'S. IN THIS EXAMPLE, YOU KNOW, THEY WOULD BE ANALOGOUS TO THE EGGS; WHITE EGGS COULD BE 0 AND BROWN EGGS COULD BE 1.

BUT WHAT WE ARE TALKING ABOUT IN TERMS OF, YOU KNOW, WHAT YOU HAVE TO CONSTRUE IS REALLY THE HARDWARE, THE BUCKETS THAT HOLD THOSE BITS.

SO I THINK THAT'S ALL I REALLY HAVE. I DON'T HAVE ANY TUTORIAL PREPARED ON THE '890. AND THE REASON IS THAT MR. BAUM WAS GOING TO HANDLE THAT, THE TERM OF THE '890, IN HIS PRESENTATION ON OUR MOTION FOR RECONSIDERATION

THE COURT: OKAY.

MR. OTTESON: BUT THAT'S OUR TUTORIAL.

AND THEN AFTER THE PLAINTIFFS GO, WE CAN DIVE RIGHT IN. AND I THINK WE'LL PROBABLY START WITH "RING OSCILLATOR."

THE COURT: OKAY. ALL RIGHT. THANK YOU VERY MUCH.

MR. OTTESON: THANK YOU.

MR. WALKER: GOOD MORNING, YOUR HONOR. TIM WALKER, AGAIN.

I'LL BE PRESENTING THE TUTORIAL ON, IT WILL BE FOCUSED ON THE CLOCK RING OSCILLATOR ISSUES. AND SOME OF THE BASIC CONCEPTS THAT ARE INVOLVED THERE.

HERE ARE THE FOUR PATENTS.

THE COURT: BY THE WAY, I NOTICE YOU DIDN'T GET A CHANCE TO UPDATE SLIDE ONE.

MR. WALKER: YEAH, I GOT THE E-MAIL AT ONE O'CLOCK IN THE MORNING.

THE COURT: I OBVIOUSLY GOT IT AS WELL. AND I THINK YOU ALL SAW THAT I DISMISSED THAT. SO LET'S MOVE WITH WHAT WE HAVE LEFT.

MR. WALKER: ALL RIGHT. SO ALL THE PATENTS HAVE COMMON IN THEIR TITLES THIS WORD "MICROPROCESSOR."

I WANT TO START BY TALKING A LITTLE BIT ABOUT WHAT A MICROPROCESSOR IS. AND WHAT I WANT TO GET PASSED IS THE TENDENCY FOR US TO ANTHROPOMORPHIZE COMPUTERS AND MICROPROCESSORS. IT'S A MACHINE. IT'S MADE OF ELECTRICAL CIRCUITS. AND THAT'S GOING TO BE IMPORTANT TO THIS INVENTION.

BECAUSE WHAT HAPPENS WHEN, WHAT HAPPENS WITH THESE ELECTRICAL CIRCUITS -- OH, HERE WE GO, I'M SORRY.

I SHOULD BE PASSING OUT MY SLIDES HERE.

THE COURT: I THINK I HAVE A SET FROM YOU ALL.

MS. KEEFE: THAT'S A DIFFERENT SET.

MR. WALKER: NO, THIS IS A DIFFERENT SET.

THE COURT: GOT IT.

MR. WALKER: ALL RIGHT. SO WHAT I WANTED TO EMPHASIZE IS THAT THE MICROPROCESSOR IS A MACHINE WITH ELECTRICAL CIRCUITS. AND WHEN THESE ELECTRICAL CIRCUITS RECEIVE A SIGNAL, THEY RESPOND IN A WAY THAT'S DICTATED BY THE PHYSICS. AND THAT LEADS US TO WHY WE HAVE, OR WHY I WANT TO TALK ABOUT CLOCK AS PART OF THE TUTORIAL.

BECAUSE THE TERM "CLOCK" IN OUR ORDINARY MEANING IS A LITTLE MISLEADING IN THE CONTEXT OF THESE INVENTIONS. THE COURT'S CLOCK UP HERE IS SOMETHING WE ALL TRY TO BE HERE BY 10 O'CLOCK -- WE KNOW MR. DAVIS DIDN'T QUITE MAKE IT.

BUT THAT'S BECAUSE THERE IS NO PHYSICAL CONNECTION BETWEEN THIS CLOCK AND MR. DAVIS. HE'S NOT PHYSICALLY RESPONDING TO THIS. HE'S TRYING TO GET HERE BEFORE THIS REACHES A CERTAIN HOUR, BUT THERE'S NO PHYSICAL CONNECTION THERE.

THE COURT: DON'T WORRY, MR. DAVIS, I WON'T LET HIM THROW YOU COMPLETELY UNDER THE BUS.

MR. DAVIS: I WAS FEELING A LITTLE BIT, YOUR HONOR.

MR. WALKER: BUT IN, YOU KNOW, IN COMMON USAGE, A CLOCK MEASURES TIME IN THE CLASSIC SENSE; ONE HOUR SHOULD BE, ON ONE CLOCK SHOULD BE AN HOUR ON ANOTHER CLOCK. AND THIS PERMITS SYNCHRONIZATION AMONG SYSTEMS, AND AMONG PEOPLE, AND AMONG THE COURT, AND EVERYBODY ELSE.

BUT THE CPU'S CLOCK IS A LITTLE DIFFERENT. THIS IS A SIGNAL THAT ACTS AS A STIMULUS FOR INSTRUCTION EXECUTION BY

THE CPU.

THERE ARE THREE ASPECTS OF THIS I WANT TO TALK ABOUT. ONE IS, I WANT TO EXPAND A LITTLE BIT ON THIS NOTION OF THE CPU CLOCKS AS PROVIDING A STIMULUS SIGNAL. AND THE IMPORTANT POINT HERE IS GOING TO BE THAT THE CPU ALWAYS RUNS AT ITS CLOCKED SPEED.

THERE IS A TENDENCY, I THINK, WHEN YOU READ THESE PATENTS, AGAIN THINKING IN TERMS OF THIS KIND OF CLOCK, TO THINK WELL, THEY CAN GET OUT OF SYNC SOMEHOW. THAT THE CPU AND THE CLOCK CAN SOMEHOW RUN AT DIFFERENT SPEEDS; THEY CANNOT. THAT'S JUST PHYSICALLY IMPOSSIBLE.

THE COURT: THAT'S KIND OF THE POINT, RIGHT? IS THAT THE SIGNAL EMANATING FROM THE CLOCK IS WHAT'S DRIVING THE FUNCTIONALITY OF THE SIGNAL.

MR. WALKER: ABSOLUTELY, CORRECT, YOUR HONOR.

I WANT TO TALK ABOUT VARIABILITY. ALL REAL CLOCKS ARE VARIABLE TO SOME DEGREE. WHAT'S GOING TO DEVELOP AS AN ISSUE IN THE CASE HERE, AND THIS GOES PERHAPS EVEN BEYOND THE CLAIMS CONSTRUCTION ISSUES TODAY, BUT ALL CLOCKS ARE VARIABLE TO SOME DEGREE.

THE COURT MAY NOT THINK ITS CLOCK IS VARIABLE. BUT IT IS. IT HAS SOME VARIANCE OF TIME. AND, AGAIN, WE'RE GOING TO GET INTO THIS ISSUE OF HOW FIXED DOES A "FIXED" CLOCK HAVE TO BE; HOW VARIABLE DOES A VARIABLE CLOCK HAVE TO BE.

AND THAT BRINGS US TO THE LAST POINT; TERMINOLOGY.

EVEN THOUGH ALL THE REAL CLOCKS ARE VARIABLE, SOME CLOCKS ARE CALLED "FIXED" FOR A PARTICULAR PURPOSE. SO WE'RE GOING TO SEE HERE, I'M GOING TO EXPLORE A LITTLE BIT ABOUT WHEN WE CALL SOMETHING FIXED, AND WHEN WE DON'T; EVEN THOUGH THEY'RE ALL VARIABLE.

THE COURT: AND ARE YOU REFERRING, WHEN YOU TALK ABOUT VARIABILITY IN THIS CONTEXT, TO VARIATIONS IN THE RATE AT WHICH THE OUTPUT THE, THE SIGNAL OUTPUT OPERATES IN OTHER WORDS?

MR. WALKER: YES; YES, I AM.

SO, FIRST, THE FUNCTION OF THE CPU CLOCK IS TO ACT AS A STIMULUS SIGNAL.

AS IS ALREADY EXPLAINED, A CLOCK SIGNAL OSCILLATES BETWEEN HIGH AND LOW, FOR EXAMPLE. AND DRIVES CIRCUITRY THAT RECEIVES THE CLOCK SIGNAL.

PHYSICALLY, THE CPU'S CLOCK SIGNAL CAUSES SIGNALS TO PROPAGATE THROUGH THE CPU. SO THE CPU RECEIVES A CLOCK SIGNAL AT WHEREVER IT RECEIVES IT, AND THEN THAT CIRCUIT, THE RECEIVING CIRCUIT RESPONDS, AND THAT SENDS OUT, AND YOU CAN JUST KIND OF THINK OF A WAVE OF SIGNALS GOING OUT THROUGH THE CPU, PROPAGATING THROUGH THE CPU, WHICH REPRESENTS THE INSTRUCTIONS BEING PERFORMED.

THERE ARE DELAYS AT EACH OF THE TRANSISTORS OF THE CPU AS THESE SIGNALS PROPAGATE THROUGH THE CPU. THE SHORTER THE PROPAGATION GOING THROUGH THE TRANSISTORS THE FASTER THE

SIGNALS PROPAGATE AND THE FASTER THE CPU EXECUTES ITS INSTRUCTIONS.

BUT, IF A NEW CLOCK SIGNAL ARRIVES BEFORE THE CPU HAS FINISHED RESPONDING TO THE PREVIOUS CLOCK SIGNAL, ERRORS CAN OCCUR. AND THIS IS ONE OF THE CONCERNS THAT THE INVENTORS HAD. AND PRIORITIZED FOR THAT MATTER.

AND THIS IS JUST TESTIMONY, DEPOSITION TESTIMONY BY ONE OF THE INVENTORS EXPLAINING THAT IN FACT THE CLOCK PROVIDES "AN EXCITING SIGNAL TO CAUSE THE TRANSITIONS TO OCCUR" IN THE CPU.

WE HAVE A LITTLE ANIMATION HERE THAT JUST ILLUSTRATES THE RELATIONSHIP AMONG THE VARIOUS THINGS WE TALK ABOUT ABSTRACTLY IN THE PATENT.

HERE WE'VE GOT, THIS IS FREQUENCY OR SPEED. THIS IS THE CLOCK.

I PUT THE CPU IN THE SAME COLOR BECAUSE, AGAIN, THE CPU HAS TO RUN AT THE CLOCK'S SPEED. HERE WE'VE GOT A BAR REPRESENTING THE SLOWEST SPEED WE EXPECT THE CPU EVER TO HAVE TO RUN. THIS IS THE "WORST CASE" SCENARIO. AND HERE, WE HAVE THE "BEST CASE" SCENARIO.

AND IF WE RUN THIS -- I THINK I CAN CONTROL THIS. WE SEE THAT THE CLOCKS CAN VARY WITH SPEED BETWEEN THE WORST CASE AND MAXIMUM, AND THE CPU WILL RUN FINE UNDER THOSE CIRCUMSTANCES.

BUT IF, AGAIN, WE HAVE TO BE CAREFUL NOT TO RUN IT

TOO FAST. AND THE PRIOR ART SOLUTION TO THIS PROBLEM, WHEN CONDITIONS GET BAD, IT HEATS UP; NOW, THE MAXIMUM GOES DOWN, AND WE GET CLOSE TO WHERE THE CPU IS RUNNING WE CAN HAVE PROBLEMS. AND IF IT DROPS DOWN FAR ENOUGH, CHAOS ENSUES.

AND THIS WAS AN ORIGINAL PRESENTATION TO JUDGE WARE, WE ACTUALLY RAN THE WHOLE CLIP HERE. BUT, YOU MAY BE FAMILIAR WITH THIS, OF THIS SCENE FROM LUCY AND ETHEL WORKING THE CHOCOLATE FACTORY. HERE THE CHOCOLATES ARE THE CLOCK SIGNALS. AND WHEN THE CHOCOLATES ARE COMING IN SLOWLY ENOUGH, THEY CAN WRAP THE CHOCOLATES AND OPERATE FINE.

THEY CANNOT -- THIS IS IMPORTANT -- THEY CANNOT WORK FASTER THAN THE CHOCOLATES ARE COMING IN. THEY CAN'T WRAP A CHOCOLATE THEY DON'T HAVE. BUT WHEN THE CHOCOLATES COME IN TOO FAST, THINGS GO CRAZY.

THE PRIOR ART SOLUTION WAS SET THE CLOCK TO THE WORST CASE. THEN WE'LL NEVER RUN TOO FAST.

AND WHAT THE INVENTORS -- THE PROBLEM THE INVENTORS SAW WITH THAT IS THAT SURE, THAT'S GREAT AS LONG AS YOU'RE DOWN IN THIS REGION OF OPERATING CONDITIONS. BUT, IF YOU'VE GOT FAVORABLE CONDITIONS, WOULDN'T WE LIKE TO TAKE ADVANTAGE OF THIS.

SO THE PURPOSE OF THE INVENTION IS TO GET THE CLOCK, MAKE THE CLOCK RUN AS FAST AS THE CPU IS ABLE TO RUN. AND HERE WE GOT A LITTLE RACE TRACK.

THE COURT: CAN I JUST STOP YOU BEFORE YOU GO

THERE.

MR. WALKER: YEAH, SURE.

THE COURT: TO CLARIFY ONE THOUGHT, I THINK. WHICH IS THAT, YOU KNOW, WE DO TALK ABOUT THE CLOCK DRIVING THE CPU, BUT IN MANY WAYS, PERTINENT TO THIS DISCUSSION, IT'S THE CPU PERFORMANCE WHICH IS DRIVING THE CLOCK SPEED.

MR. WALKER: WELL, IT'S NOT DRIVING IT.

THE COURT: IN THE SENSE THAT YOU WANT IT TO, OR YOU WANT ITS MAXIMUM CAPABILITY TO.

MR. WALKER: CORRECT. WHAT, I THINK THE ISSUE HERE IS THAT THE, IT'S THE CLOCK THAT DRIVES THE CPU.

THE COURT: ALWAYS?

MR. WALKER: ALWAYS, BUT YOU WANT THE, YOU WANT TO KNOW SOMEHOW -- THIS IS THE REAL ISSUE, PRACTICALLY, YOU DON'T KNOW HOW FAST THE CPU CAN RUN.

THE COURT: RIGHT. AND IT'S ALWAYS CHANGING.

MR. WALKER: AND IT CAN CHANGE A LITTLE BIT. AND SO THE IDEAL SOLUTION WOULD BE TO HAVE A LITTLE SPEEDOMETER OR SOMETHING TO SEND A SIGNAL BACK TO THE CLOCK, OR SOMETHING, BUT WE DON'T HAVE THAT.

THE COURT: RIGHT.

MR. WALKER: SO AS THE COURT PICKED UP ON, IN THE EARLIER TUTORIAL, THE INVENTOR'S IDEA WAS WELL, YOU PUT EVERYTHING ON THE SAME, TRANSISTORS ON THE SAME CHIP, FOR BOTH THE CLOCK AND THE CPU; THEY'LL BOTH RESPOND IN THE SAME WAY TO

CHANGING CONDITIONS. THEY'LL EITHER SLOW DOWN OR SPEED UP. AND THAT'S THE IDEA THERE.

THE COURT: RIGHT.

MR. WALKER: NOW, I WANT TO MAKE SURE THE COURT APPRECIATED THAT WHAT THE PRIOR ART DOES IS, IS IT'S SLOW BECAUSE IT'S A FIXED SPEED, AND IT HAS TO BE A FIXED SAFE SPEED.

SO HERE WE HAVE CORNERS THAT CAN ONLY BE SAFELY NAVIGATED AT 15 MILES AN HOUR. WE HAVE A RED BALL THAT GOES AT 15 MILES AN HOUR. THE YELLOW BALL CAN GO AS FAST AS IS SAFE, INCLUDING ALONG THE STRAIGHTAWAYS. AND AS WE EXPECT, THE YELLOW BALL WINS EASILY.

VARIABILITY. WHAT'S CLAIMED HERE IS A VARIABLE SPEED CLOCK. AND, AGAIN, THIS IS SOMETHING THAT I THINK IS EASY TO MISUNDERSTAND A LITTLE BIT, OR YOU HAVE TO THINK ABOUT TO REALLY UNDERSTAND WHAT THEY MEAN. BECAUSE, AGAIN, A CLOCK IN A TRADITIONAL SENSE IS SUPPOSED TO RUN AT A CONSTANT SPEED. WHAT KIND OF CLOCK RUNS AT VARIABLE SPEED? WHAT DO THEY MEAN BY THAT?

WELL, THE QUALITY OF AN EVERYDAY CLOCK IS HOW CONSTANT ITS SPEED IS. BUT DR. OKLOBDZIJA, THE TPL'S EXPERT, EXPLAINED THAT "NOTHING IN NATURE IS FIXED." AND, IN FACT, EVEN THE, HE POINTS OUT THAT EVEN THE ATOMIC CLOCKS IN GENEVA, THESE ARE THE FAMOUS ATOMIC CLOCKS THAT EVERYBODY USES AS THE STANDARD, HE'S POINTING OUT HERE THAT EVEN THESE HAVE THEIR OWN

INACCURACIES.

ALL CLOCKS, EVERY CLOCK EVER MADE BY MAN, ALL THE PRIOR ART IN OTHER WORDS, IS VARIABLE SPEED IF YOU LOOK CLOSE ENOUGH. AND THIS IS GOING TO BE THE GREAT TENSION, I THINK, THE COURT MAY SEE AS WE GO FORWARD WITH THIS CASE IS, AGAIN, HOW FIXED IS FIXED? HOW VARIABLE IS VARIABLE?

LET'S ALL EXPLORE THAT A LITTLE BIT HERE. FOR PURPOSES OF WHAT'S FIXED WITH RESPECT TO THE PATENT, WE'RE HELPED A LITTLE BIT BY THE PATENT ITSELF BECAUSE IT TALKS ABOUT A FIXED SPEED OF THE I/O INTERFACE HERE. THIS IS REFERRING TO THE CRYSTAL CLOCK. THAT EXTERNAL CRYSTAL CLOCK IS BEING REFERRED TO BY THE PATENT AS FIXED.

THE COURT: EVEN THOUGH AS WE JUST DISCUSSED IT'S NOT REALLY FIXED.

MR. WALKER: CORRECT. EXACTLY. FIXED ENOUGH, AS WE'LL SEE.

THE COURT: RIGHT.

MR. WALKER: AND WE ASKED DR. OKLOBDZIJA ABOUT THIS, WHETHER OR NOT WE CAN HAVE SOMETHING OF, YOU KNOW, AS A REALLY "FIXED" CLOCK. AND HE SAID, "I WOULD SAY THAT IT'S FAIR TO CHARACTERIZE SOMETHING AS FIXED IF IT SERVES THE PURPOSE FOR WHICH WE CONSIDER IT TO BE FIXED." SO IT'S A RELATIVE CONCEPT, THIS FIXEDNESS.

DR. OKLOBDZIJA WROTE A BOOK ON CLOCKING. AND IN HIS BOOK HE DISCUSSES SOMETHING THAT IS GOING TO COME UP HERE

TODAY IN CONNECTION WITH TALBOT. HE DISCUSSES SOMETHING CALLED A "PHASE-LOCKED LOOP." AS WE'LL SEE, THE TALBOT REFERENCE IS A PHASE-LOCKED LOOP.

AND DR. OKLOBDZIJA'S BOOK EXPLAINS THAT THE TASK, THE PURPOSES OF THE PLL IS TO ALIGN THE EXTERNAL REFERENCE CLOCK, THAT'S THE CRYSTAL CLOCK TYPICALLY, FIXED WITH THE ON-CHIP INTERNAL CLOCK.

AND SO THIS CIRCUIT IS THE LINING CIRCUIT. IT'S SOMETHING THAT IS INTENDED TO STABILIZE. AGAIN, THE IDEAL IS ZERO PHASE DIFFERENCE; THE REALITY IS NOT QUITE.

PHASE-LOCKED LOOPS ARE VERY OLD. THEY DATE BACK TO 1932. IT'S A FEEDBACK CIRCUIT THAT LOCKS AN OSCILLATOR GENERATED SIGNAL'S PHASE TO A REFERENCE SIGNAL. AND IT'S BEEN ANALOGIZED IN THIS CASE TO "CRUISE CONTROL." AND ALSO TO A THERMOSTAT.

AND HERE'S A SIMPLE DIAGRAM. I'LL JUST RUN THROUGH THIS QUICKLY. THE PHASE-LOCKED LOOP ITSELF IS IN THE RED HERE. IT HAS A PHASE DETECTOR. IT HAS A VOLTAGE CONTROL. IT COULD ALSO HAVE A CURRENT CONTROLLED OSCILLATOR. THIS HAPPENS TO BE THE ONE ILLUSTRATED IN DR. OKLOBDZIJA'S TEXTBOOK. THERE'S A CONTROL VOLTAGE THAT CONTROLS HOW FAST THE VOLTAGE-CONTROLLED OSCILLATOR WORKS.

HERE WE SEE THE REFERENCE SIGNAL COMING INTO THE PHASE DETECTOR. THAT'S THE OUTPUT FROM THE OSCILLATOR. AND THAT OUTPUT IS WRAPPED AROUND, FED BACK INTO THE PHASE

DETECTOR. AND SO THIS PHASE DETECTOR DETECTS ANY DIFFERENCE IN PHASE BETWEEN WHAT'S COMING OUT OF THE PHASE-LOCKED LOOP, AND THIS EXTERNAL CLOCK SIGNAL.

AND IF IT DETECTS A PHASE DIFFERENCE, THE ELECTRONIC CIRCUITRY HERE IS DESIGNED TO CHANGE THE CONTROL VOLTAGE, TO CHANGE THE VOLTAGE-CONTROLLED OSCILLATOR SPEED TO BRING THEM BACK INTO PHASE.

THE COURT: OR AS CLOSE TO PHASE AS ONE CAN MAINTAIN.

MR. WALKER: RIGHT, THAT'S RIGHT. THAT'S RIGHT.

AND DR. OKLOBDZIJA MAKES THE POINT THAT LIKE CRUISE CONTROL OR THERMOSTATS, PHASE-LOCKED LOOPS CORRECT AFTER DEVIATION FROM THE REFERENCE. SO YOU SET YOUR THERMOSTAT FOR 68 DEGREES, THE HEAT DOESN'T COME ON UNTIL IT'S 69 DEGREES. AIR CONDITIONING DOESN'T COME ON UNTIL IT'S - I'M SORRY, THE HEAT DOESN'T COME ON UNTIL 67 DEGREES, THE AIR CONDITIONING COMES ON AT 69.

HERE WE HAVE A LITTLE ANIMATION HERE TO SHOW WHAT YOU MAY EXPERIENCE WITH CRUISE CONTROL. IF YOU SLOW DOWN A LITTLE BIT GOING UP THE HILL, BUT THEN YOU CORRECT. AND THE LEVEL IS FINE, BUT IF YOU'RE GOING DOWN THE HILL YOU'LL SPEED UP A LITTLE BIT, AND THEN IT WILL CORRECT BACK DOWN.

THE PATENTS TALK ABOUT THE "FAMILIAR RING OSCILLATOR." THEY USE THIS PHRASE "FAMILIAR RING OSCILLATOR." AND THIS IS THE PICTURE OF THE FAMILIAR RING OSCILLATOR. THIS

IS 430. AND YOU SAW HOW THIS WORKED.

THE COURT: UH-HUH.

MR. WALKER: AND IN THE PRIOR ART, THESE KINDS OF RING OSCILLATORS IN THE PRIOR ART WERE PUT ON CHIPS TO TEST HOW WELL THEY'D BEEN MADE; HOW FAST ARE THE TRANSISTORS. AND SO LITERALLY YOU JUST HAD THIS, BASICALLY YOU JUST HAD THE RING OSCILLATOR ON THE CHIP; TURN IT ON, MEASURE HOW FAST IT'S RUNNING, AND THAT TELLS YOU HOW FAST YOUR TRANSISTORS ARE.

THEY'RE REFERRED TO AS "FREE RUNNING" MEANING THEY'RE ALLOWED TO RUN AT THEIR NATURAL FREQUENCY. AND WHAT'S IMPORTANT HERE -- THIS IS DR. OKLOBDZIJA'S DURING THE DEPOSITION WE HAD IN PREPARATION FOR TODAY, AND HE WAS FAMILIAR WITH THIS RING OSCILLATOR, THIS TEST STRUCTURE WE ARE TALKING ABOUT, AND HE DESCRIBED IT AS "FREE RUNNING."

AND I ASKED HIM WELL, WHAT DO YOU MEAN BY THAT? "MEANS THAT IT WOULD RUN AS FAST AS IT CAN BASED ON THE PARAMETERS, TEMPERATURE, AND THE OPERATING VOLTAGE."

OKAY. SO THE IDEA HERE IS I THINK AN IMPORTANT IDEA IS TO UNDERSTAND THAT THIS, THIS TEST STRUCTURE, THIS FAMILIAR RING OSCILLATOR RUNS AS FAST AS IT CAN. THAT'S THE WHOLE IDEA OF IT.

DR. OKLOBDZIJA FURTHER TESTIFIED THAT THE RING OSCILLATOR FREQUENCY IS LIMITED ONLY BY HOW FAST THE INVERTERS CAN SWITCH. AND I ASKED HIM WHAT IT WAS THAT ALLOWED IT TO BE FREE RUNNING. AND IT WAS JUST RUNNING BASED ON THE INTERNAL

SPEED OF THE INVERTERS. HOW FAST THE INVERTER CAN SWITCH.

AND THAT'S THE TUTORIAL PART. AND WE'LL GET INTO HOW TO APPLY THAT TO THE TALBOT REFERENCE OVER THE NEXT ONE.

THE COURT: ALL RIGHT. THANK YOU VERY MUCH. LET'S BEGIN WITH TERMS.

MR. OTTESON: ALL RIGHT. WE WERE GOING TO START WITH "RING OSCILLATOR" IF THE PLAINTIFFS ARE OKAY WITH THAT?

MS. KEEFE: THAT SOUNDS GREAT.

THE COURT: HOW IS THAT FOR A RINGING ENDORSEMENT?

AND I THINK IT MAKES SENSE, PARTICULARLY IN LIGHT OF WHAT WE JUST HEARD.

MR. OTTESON: YEAH, IT FLOWS NATURALLY.

SO WE START OUT WITH WHAT JUDGE WARE DID. AND I THINK IT'S WORTH NOTING THAT THERE ARE, YOU KNOW, SOME SIGNIFICANT SIMILARITIES BETWEEN THE PARTIES' CONSTRUCTIONS THAT YOU'RE ALREADY AWARE OF. MULTIPLE ODD NUMBERS OF INVERTERS OR INVERSIONS ARRANGED IN A LOOP. SO WE AGREE WITH JUDGE WARE; WE THINK HE GOT IT RIGHT.

IN FACT, JUDGE WARD HAD A CONSTRUCTION THAT WAS VERY SIMILAR, IN EAST TEXAS, FIVE OR SO YEARS AGO. AND WE THINK HE GOT IT RIGHT TOO.

NOW, THIS YOU'VE ALREADY SEEN. YOU KNOW HOW A RING OSCILLATOR WORKS. AND IT'S ILLUSTRATED IN FIGURE 18. AND ALSO FIGURE 19 OF THE PATENT, AND WE'LL GET TO THAT TOO, BECAUSE IT SHOWS HOW THE SIGNAL VARIES AT EACH OF THE PHASES, AND HOW

THAT'S USED FOR A CLOCK SIGNAL. WHICH DOESN'T REALLY DRIVE THE CPU BUT IT DOES SYNCHRONIZE THE FUNCTIONS OF THE CPU. IT'S NECESSARY TO SYNCHRONIZE THE FUNCTIONS OF THE CPU.

THE COURT: WHAT'S THE DISTINCTION YOU'RE MAKING BETWEEN THOSE TWO?

MR. OTTESON: I THINK IT'S VERY SMALL. THE POINT IS, JUST LIKE MR. WALKER SAID, THE CPU CAN'T GO FASTER THAN THE CLOCK.

THE COURT: GOT IT.

MR. OTTESON: THAT'S IT.

SO, AS YOU'RE AWARE FROM THE BRIEFING, THERE ARE SOME EXTRA THINGS THAT THE PLAINTIFFS WANT TO CRAM INTO THE CONSTRUCTION OF RING OSCILLATOR, WHICH WE THINK ARE NOT APPROPRIATE. IT'S THESE TWO LIMITATIONS OF BEING NON-CONTROLLABLE, AND VARIABLE BASED ON TEMPERATURE, VOLTAGE AND PROCESS PARAMETERS.

SO I KNOW I DON'T NEED TO EXPLAIN THE LAW TO YOU. YOU'RE VERY FAMILIAR WITH IT. BUT THE POINT IS WE'VE GOT TO BE VERY CAREFUL WHEN THE INTRINSIC EVIDENCE IS CLEAR ABOUT WHAT THE CONSTRUCTION IS, ABOUT CRAMMING THINGS INTO THE DEFINITION OF A TERM THAT IS VERY CLEAR FROM THE CLAIMS SPECIFICATION. SO THAT'S REALLY THE POINT.

WE WENT OVER THIS IN THE TUTORIAL TOO, THE DIFFERENCE BETWEEN THE OLD WAY OF CLOCKING THE CPU -- WE PROBABLY DON'T -- YEAH, RUN THAT VERY QUICK.

AGAIN, OBVIOUSLY THE CPU CANNOT GO FASTER THAN THE ORANGE BALL, EVEN UNDER BETTER CONDITIONS -- PUT UP THE NEXT ONE -- THE PURPLE BALL ONLY REPRESENTS THE POTENTIAL UPWARD SPEED LIMIT.

OKAY. AND WE TALKED ABOUT THE MOORE SOLUTION.

NOW, HERE IS CLAIM 1, AND IT REALLY DOES, YOU KNOW, IF YOU LOOK AT FIGURE 17, AND WALK THROUGH CLAIM 1, YOU CAN REALLY SEE WHAT ALL THIS IS TALKING ABOUT NOW ESPECIALLY SINCE WE HAVE BEEN ALL OVER THE BACKGROUND MATERIAL.

YOU HAVE A RING OSCILLATOR IN THE INTEGRATED CIRCUIT CONNECTED TO THE CPU. SO BOTH THE CPU AND THE RING OSCILLATOR ARE IN A SINGLE INTEGRATED CIRCUIT, AND THAT'S REPRESENTED BY THE RED BOX.

AND IT SAYS THEY EACH INCLUDE A PLURALITY OF ELECTRONIC DEVICES. THIS BEING, AS I'M SURE YOU'RE AWARE, A TERM OF ART WITH SEMICONDUCTOR, IT'S THE LITTLE TINY TRANSISTORS, THAT ARE CORRESPONDINGLY CONSTRUCTED OF THE SAME PROCESS TECHNOLOGY WITH CORRESPONDING MANUFACTURING VARIATIONS, AND WE TALKED ABOUT THAT.

THE COURT: RIGHT.

MR. OTTESON: SO, YOU KNOW, HERE'S YOUR CHIP. I'M NOT REPRESENTING THAT THIS IS ACTUALLY WHAT THESE PORTIONS OF THE CHIP ARE, BUT THE POINT IS THEY ARE ON THE SAME PIECE OF SILICON. I THINK YOU GET THAT.

THERE'S THE WAFER. THE COLORS JUST REPRESENT THAT

YOU'RE GOING TO HAVE PERFORMANCE VARIATIONS BETWEEN THE INDIVIDUAL DIE ACROSS A WAFER. BUT THOSE ARE GOING TO BE INCORPORATED INTO BOTH THE RING OSCILLATOR AND THE CPU OF ANY GIVEN DIE.

AND THEN, WE HAVE THIS SECOND CLOCK, WHICH IS USED TO CLOCK THE I/O FUNCTIONS. AND IT ORIGINATES FROM A SOURCE OTHER THAN THE RING OSCILLATOR WHICH IS USED FOR THE CPU.

SO WE HAVE RING OSCILLATOR ALL THROUGH CLAIM 1.

NOW, HERE'S, WE'RE GOING TO GO OVER SOME OF THE PROBLEMS WITH WHAT THE PLAINTIFFS ARE TRYING TO DO HERE. FIRST OF ALL, THE TERM "NON-CONTROLLABLE" APPEARS NO WHERE IN THE CLAIMS, NO WHERE IN THE SPECIFICATION. FRANKLY, THE TERM ITSELF IS AMBIGUOUS. I DON'T EVEN KNOW WHAT NON-CONTROLLABLE MEANS. I DON'T KNOW IF IT MEANS DOESN'T HAVE THE ABILITY TO BE CONTROLLED, IS NOT BEING CONTROLLED RIGHT NOW. I MEAN, I DON'T EVEN KNOW WHAT THE TERM MEANS GENERALLY.

I COULD SAY THAT I HAVE AN UNCONTROLLABLE URGE TO HAVE A DIET COKE RIGHT NOW. BUT IF I TOLD MY FRIEND I HAVE A NON-CONTROLLABLE URGE, THEY WOULD LOOK AT ME LIKE I WAS CRAZY.

BUT, SO AS YOU KNOW, CLAIM TERMS NEED TO BE CONSTRUED SO THAT THEY HAVE A CLEAR MEANING.

THE COURT: WOULD YOU BE SATISFIED IF THEY USED UNCONTROLLABLE INSTEAD OF NON-CONTROLLABLE?

MR. OTTESON: NO.

THE COURT: I GUESS NOT. TELL ME WHY.

MR. OTTESON: WELL, YEAH, I MEAN, FIRST OF ALL, YEAH, UNCONTROLLABLE DOESN'T APPEAR IN THE CLAIMS OR SPECIFICATION EITHER. THAT'S WHERE WE START, UNDER PHILLIPS, AS YOU KNOW.

NOW, IN THE PROSECUTION HISTORY, AND THEY'RE TRYING TO SAY THAT THERE HAS BEEN A DISCLAIMER, OR DISAVOWAL, BUT THE, THIS TERM WAS SURFACED BY THE EXAMINER. HE WAS CHARACTERIZING WHAT THE PATENTEE SAID, BUT WE DON'T REALLY KNOW WHAT HE WAS THINKING. WE THINK HE GOT IT WRONG. BUT IT DIDN'T COME FROM US. AND THEN --

SO IF YOU LOOK AT THE PROSECUTION HISTORY, AND WE'VE BRIEFED THIS, YOU KNOW, UP THE YING YANG. I'M SURE YOU UNDERSTAND --

MS. KEEFE: IS THAT A TECHNICAL TERM?

MS. OTTESON: THAT'S A TECHNICAL LEGAL TERM. I USE THOSE ON MY FRIENDS AND FAMILY QUITE A BIT.

MS. KEEFE: GOT IT.

MR. OTTESON: THEY SAY, YOU'VE GOT A TECHNICAL TERM FOR THAT AND THEN -- WHATEVER.

OKAY. SO, BUT WE SEE THE TERM NON-CONTROLLABLE HERE. IT'S THE ONLY PLACE IT APPEARS ANYWHERE IN THE, IN THE INTRINSIC EVIDENCE. IT'S THE ONLY PLACE. IT CAME FROM THE EXAMINER.

SO WHAT DID THE EXAMINER SAY HERE? FIRST OF ALL, HE WAS TALKING ABOUT A BUNCH OF DIFFERENT ISSUES, THIS TALBOT

ISSUE BEING ONE. AND SAID THAT, YOU KNOW, THEY AGREED THAT THE PATENTEE WAS GOING TO RECONSIDER HIS REJECTION BASED ON A FORTHCOMING RESPONSE. AND WE'VE BRIEFED THIS, YOU KNOW, AT LENGTH, AS YOU KNOW.

AND THEN WHAT HAPPENED WAS THE PATENTEE DID SUBMIT A WRITTEN PAPER WITHIN EIGHT DAYS. AND EXPLAINED THAT TALBOT, YOU KNOW, THE TALBOT REFERENCE SIMPLY DOES NOT HAVE A RING OSCILLATOR.

NOW, TODAY WE ARE ARGUING ABOUT WHETHER IT DOES DISCLOSE A RING OSCILLATOR, BUT I JUST WANT TO POINT OUT THAT AS FAR AS THE INTRINSIC EVIDENCE GOES, AND HERE'S THE ACTUAL SUBMISSION FROM THE PATENTEE, "APPLICANTS RESPECTFULLY ASSERT THAT THE REASON THEY ARE NOT CHARACTERIZED BY TALBOT AS RING OSCILLATORS IS BECAUSE THEY ARE NOT RING OSCILLATORS." TALBOT DOESN'T HAVE RING OSCILLATORS.

AND, AGAIN, WE'RE ARGUING ABOUT THE MEANING OF RING OSCILLATOR HERE TODAY AND WHETHER THE SCHMITT TRIGGER CIRCUITRY IN TALBOT IS A RING OSCILLATOR, BUT THE INTRINSIC EVIDENCE SHOWS THAT THE EXAMINER ACQUIESCED IN THE PATENTEES' ARGUMENT.

THE COURT: WITH RESPECT TO TALBOT?

MR. OTTESON: WITH RESPECT TO THE FACT THAT TALBOT DOESN'T DISCLOSE A RING OSCILLATOR.

THE COURT: OKAY. SO, LET ME STOP YOU THERE FOR A MOMENT, BECAUSE I THINK YOU HAVE PUT YOUR FINGER ON A PRETTY INTERESTING AND HARD QUESTION, WHICH IS IN SITUATIONS LIKE

THIS, FIRST OF ALL, AS I FONDLY RECALL THE EXAMINER INTERVIEWS ARE OFTEN SUMMARIZED OR CHARACTERIZED BY THE EXAMINER RATHER THAN THE PATENTEE.

ALTHOUGH I THINK THE PATENTEE HAS AN OPPORTUNITY, RIGHT, TO SUBMIT THEIR VERSION OF WHAT WAS DISCUSSED, ISN'T THAT GENERALLY TRUE.

MR. OTTESON: WELL, YOU KNOW --

THE COURT: IT MAY NOT HAVE BEEN DONE HERE.

MR. OTTESON: -- I THINK THAT IS TRUE. AND I THINK IN THEIR WRITTEN SUBMISSION, BASICALLY THAT'S WHAT THEY DID, THEY SAID NO. YOU KNOW, TALBOT SHOULDN'T PREVENT US FROM GETTING THIS PATENT BECAUSE TALBOT DOESN'T DISCLOSE A RING OSCILLATOR.

THE COURT: OKAY. IN ANY EVENT, YOU HAVE A SITUATION HERE WHERE THE EXAMINER HAS CHARACTERIZED THE DIALOG WITH THE PATENTEE, OR THE APPLICANT AT THAT POINT, AND IN THAT CHARACTERIZATION CERTAINLY HAS SUGGESTED THIS "NON-CONTROLLABLE" LANGUAGE WAS USED.

BUT IF I UNDERSTAND WHAT YOU'RE TELLING ME, IT'S ONLY IN THAT INTERVIEW SUMMARY THAT THE WORD "NON-CONTROLLABLE" APPEARS; IS THAT TRUE? THERE IS NO OTHER PART OF THE INTRINSIC RECORD WHICH USES THAT TERM OR TEACHES THAT CONCEPT, EVEN IF THAT TERM WASN'T USED?

MR. OTTESON: WELL, THE PLAINTIFFS POINT TO A COUPLE OF OTHER PASSAGES IN THE FILE HISTORY WHERE THEY TRY TO

SAY OH, THIS ALSO SHOWS THAT, YOU KNOW, IT'S NON-CONTROLLABLE, BUT THEY DON'T TEACH THAT. I MEAN, FOR ONE, I'M TRYING TO REMEMBER, I GUESS THE MAGAR REFERENCE, THAT WAS TALKING ABOUT A CLOCK THAT WAS CLEARLY EXTERNAL TO THE DIE. IT WASN'T EVEN ON THE SAME CHIP.

WITH SHEETS THERE WAS A DISPUTE ABOUT THAT. THERE WAS AN ARGUMENT ABOUT IT. THE PATENTEE BASICALLY SAID THE SAME THING, YOU KNOW, WE THINK THE SHEETS CLOCK, AND IT'S NOT CLEAR, ISN'T EVEN ON THE SAME DIE. SO IT'S NOT LIKE THE RING OSCILLATOR OF THE MOORE AND FISH INVENTION AT ALL.

AND SO, WE FEEL LIKE THEY'RE TRYING TO, YOU KNOW, POINT TO SOME OTHER PASSAGES OF THE FILE HISTORY WHICH ARE MISCHARACTERIZATIONS, FRANKLY. AND SAY -- AND BASICALLY ARGUE THAT WHAT WE SAID IS IT'S NOT NECESSARY FOR YOU TO HAVE SOME KIND OF SPECIAL CONTROL. BUT THAT'S NOT THE SAME THING AS SAYING YOU CAN'T HAVE ANY KIND OF CONTROL. THAT'S A SEPARATE QUESTION. AND WHETHER THERE WAS A DISCLAIMER FOR THAT IS A VERY DIFFERENT QUESTION.

THE COURT: CAN YOU GO BACK TO THE SLIDE WHERE YOU HAD THE -- YES, THAT'S THE ONE.

MAYBE WITHOUT THE BALLOON, IF WE CAN DO THAT. YEAH. THERE WE GO.

SO HERE THE EXAMINER, AND I UNDERSTAND THIS WAS DURING THE RE-EXAMINATION, NOT THE ORIGINAL EXAMINATION.

MR. OTTESON: YES.

THE COURT: THE EXAMINER IS --

MR. OTTESON: AND IT WASN'T THIS PATENT EITHER, IT WAS THE '148 PATENT.

THE COURT: RIGHT.

IS SAYING THAT THE PATENT OWNER DISCUSSED, I'M LOOKING AT THE THIRD PARAGRAPH HERE, "THE PATENT OWNER DISCUSSED FEATURES OF A RING OSCILLATOR, SUCH AS BEING NON-CONTROLLABLE, AND BEING VARIABLE BASED ON THE ENVIRONMENT."

AND YET, I TAKE IT PART OF YOUR POINT IS THAT AT THE VERY LAST SENTENCE HE EXPLICITLY SAYS HE WILL THEN RECONSIDER THE CURRENT REJECTION BASED ON THE RESPONSE WHICH NECESSARILY REQUIRES US TO LOOK AT THAT RESPONSE AND SEE WHAT WAS SAID.

MR. OTTESON: EXACTLY. THAT'S MY POINT, JUDGE.

THE COURT: OKAY.

MR. OTTESON: IS THAT HE, YOU KNOW, HE WAS CHARACTERIZING, YOU KNOW, EXACTLY WHAT WAS SAID WE DON'T KNOW, BUT HE SPECIFICALLY SAID I'M GOING TO GIVE THE PATENTEE A CHANCE TO TRAVERSE THE REJECTION, AND EXPLAIN WHY THERE SHOULDN'T BE A REJECTION BASED ON TALBOT. AND THAT'S WHAT HE DID.

AND, THE WRITTEN RESPONSE WAS, HEY, TALBOT DOES NOT DISCLOSE A RING OSCILLATOR. AND THAT'S WHAT WE'RE TALKING ABOUT IN THIS PATENT. WE'RE TALKING ABOUT A RING OSCILLATOR ON THE SAME PIECE OF SILICON AS THE CPU. TO CLOCK THE FUNCTIONS

OF THE CPU.

SO I THINK, UNDER THE LAW, AND YOU KNOW WE'VE CITED THIS, BASED ON THE INTRINSIC EVIDENCE, THERE IS NO CLEAR AND UNMISTAKABLE DISAVOWAL. AND THAT'S WHAT YOU HAVE TO HAVE HERE TO CRAM IN A LIMITATION THAT DOESN'T APPEAR ANYWHERE IN THE SPECIFICATION OF THE CLAIMS. WE SIMPLY DON'T HAVE THAT.

AND I THINK EVEN JUDGE WARE RECOGNIZED THAT IN HIS ORDER. ON PAGE 16, HE CITED THE OMEGA ENGINEERING CASE. AND AT THIS POINT THIS IS WHERE, YOU KNOW, WE'RE STARTING TO GET INTO SOMETHING THAT'S FAR AFIELD FROM WHAT'S REALLY NECESSARY TO UNDERSTAND THE MEANING OF THIS CLAIM TERM.

I THINK JUDGE WARE DID A FANTASTIC JOB UNDER DIFFICULT CIRCUMSTANCES HE INHERITED FROM ANOTHER JUDGE. HE REALLY WORKED HARD, AND I THINK DID A GREAT JOB TO ISSUE THIS FIRST CLAIM CONSTRUCTION ORDER LAST JUNE.

BUT, NOW THAT WE'RE TALKING ABOUT WHAT EXPERTS 20 YEARS LATER THINK OF THE TERM "RING OSCILLATOR" AND WHETHER TALBOT DISCLOSES ONE, THAT'S NOT REALLY INTRINSIC EVIDENCE ANYMORE. WE'RE GETTING FAR AFIELD.

AND WHAT WE'RE HEARING FROM THE PLAINTIFFS IS REALLY A NON-INFRINGEMENT ARGUMENT. THEY'RE TRYING TO SAY WELL, WE HAVE VOLTAGE-CONTROLLED OSCILLATORS, WE HAVE PHASE-LOCKED LOOPS. WELL, THERE IS VARIABILITY IN THOSE TWO. AND THE FACT OF THE MATTER IS AS A RESULT OF THE PHYSICS OF HAVING YOUR RING OSCILLATOR AND YOUR CPU BAKED INTO THE SAME CHIP,

THEY ARE GOING TO VARY TOGETHER AS A RESULT OF THE PROCESS, VOLTAGE AND TEMPERATURE. BUT THAT DOESN'T MEAN THAT YOU COULDN'T PUT SOME KIND OF VOLTAGE CONTROL ON THAT IF YOU WANT.

AND, AGAIN, THEY VARY TOGETHER BASED ON VOLTAGE TOO. YOU CAN DO THAT IF YOU WANT. BUT THAT'S AN INFRINGEMENT QUESTION. THAT'S NOT WHAT WE'RE TALKING ABOUT HERE.

NEVERTHELESS, JUDGE WARE ASKED US TO ADDRESS HIS QUESTION AND SO WE DID. BUT TO UNDERSTAND WHETHER OR NOT FIGURE 3 OF THE TALBOT AND CIRCUIT THERE DISCLOSES A RING OSCILLATOR YOU FIRST, WE HAVE TO UNDERSTAND THE BASIS OF WHAT A RING OSCILLATOR IS, LOOKING AT INTRINSIC EVIDENCE, FIGURE 18.

FIGURE 18 AND FIGURE 19, AND THIS IS SOMETHING THAT I WAS ALLUDING TO EARLIER, IT'S A LITTLE BIT DIFFICULT TO SEE HERE, BUT YOU CAN SEE PHASE ON THE Y ACCESS, 0, 1, 2, 3, THAT CORRESPONDS TO THESE PHASES, OR SAMPLING POINTS TO GET YOUR CLOCK SIGNAL OFF OF THE RING OSCILLATOR.

SO, FOR EXAMPLE, PHASE 1, THAT'S WHERE, YOU KNOW, WE WERE LOOKING AT THE EXAMPLE IF IT'S 0 OR 1, IT'S HIGH OR LOW. AND THIS SHOWS HOW THAT CHANGES OVER TIME. IT'S VERY SIMPLE. TICK TOCK, TICK TOCK.

THE COURT: RIGHT.

MR. OTTESON: THAT'S WHAT A RING OSCILLATOR IS.

NOW, WE HAVE SUBMITTED, AND I'LL ADMIT IT'S EXTRINSIC EVIDENCE, FROM OUR EXPERT DR. OKLOBDZIJA, AND HE HAS GONE INTO DETAIL ABOUT WHY A SCHMITT TRIGGER BASED OSCILLATOR

IS NOT A RING OSCILLATOR.

AND THERE ARE A COUPLE OF REASONS. BUT PRIMARILY, THE FREQUENCY OF OSCILLATION WITH A SCHMITT TRIGGER OSCILLATOR IS NOT BASED ON THE NUMBER OF INVERTERS, LIKE IT IS WITH A RING OSCILLATOR. IF YOU WANT SLOWER OSCILLATION, YOU JUST PUT MORE INVERTERS IN IT, THERE'S MORE PROPAGATION, AND IT TAKES MORE TIME TO GET AROUND THE LOOP.

BUT THAT HAS NOTHING TO DO WITH THE OSCILLATION FOR A SCHMITT TRIGGER OSCILLATOR BECAUSE THE OSCILLATION IS DOMINATED BY THE CAPACITANCE AND RESISTANCE OF THESE DEVICES THAT ARE CONNECTED TO THE SCHMITT TRIGGER SWITCH. AND AS A RESULT YOU GET A HYSTERESIS CURVE. WHICH I'M NOT SMART ENOUGH TO GO INTO GREAT DETAIL HERE, BUT THE EXPERTS DID, TO EXPLAIN WHAT THE DIFFERENCE WAS.

BUT, AGAIN, THIS IS ALL EXTRINSIC EVIDENCE. WHAT THEIR EXPERT, DR. WOLFE, SAID IS TOO.

I THINK, AGAIN, WE'RE FAR AFIELD HERE, BUT WE DID THIS BECAUSE JUDGE WARE ASKED FOR IT.

THE COURT: CAN I ASK YOU, JUST GOING BACK TO THE DIAGRAM FOR A MOMENT.

MR. OTTESON: SURE.

THE COURT: IN THE SCHMITT TRIGGER OSCILLATOR, SCHMITT TRIGGER RELAXATION OSCILLATOR.

MR. OTTESON: YES.

THE COURT: IF I HAVE THAT RIGHT -- THERE ARE,

UNDOUBTEDLY MULTIPLE INVERTERS IN THE LOOP, CORRECT?

MR. OTTESON: THERE MAY OR MAY NOT BE.

THE COURT: MAY OR MAY NOT BE.

MR. OTTESON: CORRECT.

THE COURT: AND WHERE THERE ARE MULTIPLE INVERTERS IN A SCHMITT TRIGGER RELAXATION OSCILLATOR, I READ THE EXPERT'S DECLARATIONS AS AGREEING LARGELY THAT THAT, THAT THE NUMBER OF THOSE INVERTERS WILL AFFECT, RIGHT, FREQUENCY OF OSCILLATION. IT'S JUST THE POINT IS, AS I UNDERSTAND DR. OKLOBDZIJA'S --

MR. OTTESON: YES.

THE COURT: -- HE'S SAYING THAT THAT'S LIKE A THIRD OR FORTH OR TENTH ORDER CONSIDERATION IN THIS ARCHITECTURE BECAUSE WHAT'S REALLY DRIVING THE OSCILLATION HERE IS THINGS LIKE CAPACITANCE AND RESISTANCE.

MR. OTTESON: EXACTLY. SO BASICALLY WHAT YOU HAVE TO DO TO GET THIS -- HOW THE SCHMITT TRIGGER RELAXATION OSCILLATOR WORKS IS YOU CHARGE UP THIS CAPACITOR, AND ONCE IT'S CHARGED UP IT'S TRIGGERED BY THE SCHMITT TRIGGER TO DISCHARGE. AND SO IT'S THE CHARGING AND DISCHARGING OF THE CAPACITOR THAT DOMINATES THE CLOCK SIGNAL.

AND LIKE DR. OKLOBDZIJA SAID, IT'S A, YOU KNOW, ORDERS OF MAGNITUDE GREATER THAN ANY IMPACT OF INVERTERS THAT MAY OR MAY NOT BE IN THE CIRCUIT. BECAUSE AS HE ALSO SAID, YOU CAN OSCILLATE WITH JUST A SCHMITT TRIGGER AND THE CAPACITOR, OR CAPACITORS THAT ARE CONNECTED TO IT.

THE COURT: GOT IT.

MR. OTTESON: IT'S TOTALLY DIFFERENT. IT'S A COMPLETELY DIFFERENT MECHANISM.

AND AS DR. OKLOBDZIJA POINTED OUT, TALBOT ITSELF DOES NOT CHARACTERIZE FIGURE 3 OF THE '581 PATENT AS A RING OSCILLATOR.

SO THIS IS WHAT OUR EXPERT SAYS, THEY'VE GOT WHAT THEIR EXPERT SAYS. AGAIN, IT'S EXTRINSIC EVIDENCE. AND I DON'T THINK SHOULD CONTROL THE QUESTION OF WHETHER, YOU KNOW, THERE IS CONTROLLABILITY OR NOT. I MEAN, AGAIN, WE HAVE, WE HAVE A CLAIM, JUDGE, THAT HAS A CPU, AND A RING OSCILLATOR ON THE SAME PIECE OF SILICON, AND WE HAVE I/O FUNCTIONALITY THAT'S CLOCKED BY A DIFFERENT CLOCK, AN ASYNCHRONOUS CLOCK. SO WE HAVE ELEMENTS A, B, C AND D, FOR EXAMPLE.

IT'S FUNDAMENTAL PATENT LAW THAT YOU CAN ADD AN ELEMENT E AND STILL INFRINGE. THAT'S WHAT THEY'RE TRYING, THEY'RE TRYING TO DECIDE INFRINGEMENT NOW, BY SHOVING NON-CONTROLLABILITY INTO THIS CLAIM. AND IT'S IMPROPER.

THE COURT: I WANTED TO ASK YOU ABOUT THE VARIABILITY POINT. BECAUSE I THINK IT'S SLIGHTLY DIFFERENT.

MR. OTTESON: SURE.

THE COURT: I READ THE WRITTEN DESCRIPTION OF THE '336 AS CERTAINLY TEACHING THE NOTION THAT TEMPERATURE, VOLTAGE, PROCESS IN THE ENVIRONMENT CAN IN FACT AFFECT THE OSCILLATION. SO HOW DO YOU SQUARE YOUR POSITION WITH WHAT I

THINK IS SOME PRETTY CLEAR DISCUSSION IN THE WRITTEN DESCRIPTION OF THAT?

MR. OTTESON: WELL, THE FACT OF THE MATTER IS IF YOU HAVE A RING OSCILLATOR AS YOUR CLOCK ON THE SAME PIECE OF SILICON AS THE CPU CIRCUITS, AS A BASIC LAW OF PHYSICS, THOSE CIRCUITS ARE GOING TO BE IMPACTED SIMILARLY WITH VOLTAGE, TEMPERATURE AND PROCESS VARIATIONS.

THE COURT: UH-HUH.

MR. OTTESON: IT'S JUST A FACT.

NOW, EVEN DR. WALKER, IN HIS TUTORIAL WAS TELLING US THAT, YOU KNOW, NOTHING IS FIXED. THERE'S ALWAYS VARIATION. SO THOSE VARIATIONS ARE ALWAYS GOING TO BE THERE EVEN IF YOU HAVE A PHASE-LOCKED LOOP, OR A VOLTAGE-CONTROLLED OSCILLATOR.

THE COURT: RIGHT.

MR. OTTESON: BUT, AGAIN, THAT'S FOR A DIFFERENT DAY. THAT'S INFRINGEMENT. THAT'S ELEMENT E. WE'VE ALREADY GOT ELEMENTS A, B, C AND D. WE'RE TALKING ABOUT SOMETHING DIFFERENT.

THE COURT: AND I TAKE IT YOUR POINT IS THAT, AS WITH THE NON-CONTROLLABLE ISSUE, AGAIN, I HAVE TO LOOK FOR CLEAR DISCLAIMER, UNMISTAKABLE DISCLAIMER TO CONCLUDE THE WRITTEN DESCRIPTION IS IN FACT ABANDONING ANY NON-VARIABLE.

MR. OTTESON: ABSOLUTELY. AND WE JUST DON'T BELIEVE IT DOES THAT.

ONE MORE THING I WAS GOING TO POINT OUT ON THIS

POINT IS, IF YOU LOOK AT, IN THE BACK OF YOUR HANDOUT THERE, WE ONLY RECENTLY DISCOVERED THIS. BUT THIS IS A PATENT THAT WAS FILED IN 1992, BY A GENTLEMAN NAMED FONG.

AND IF YOU LOOK AT FIGURE 1 AND FIGURE 2, YOU'LL SEE -- I MEAN, THIS IS MUCH MORE CONTEMPORANEOUS THAN OUR EXPERT DECLARATIONS THAT WE HAVE HERE ABOUT WHETHER THE SCHMITT TRIGGER OSCILLATION CIRCUIT IN TALBOT IS A RING OSCILLATOR. HERE WE HAVE SOMEBODY WITHIN, YOU KNOW, TWO OR THREE YEARS OF THE SAME TIME, CLEARLY DISTINGUISHING THEM, SAYING THAT THEY ARE DIFFERENT.

SO, IF WE FOCUS ON THE NARROW QUESTION THAT JUDGE WARE WAS ASKING, WELL GEE, IS THAT CIRCUIT IN FIGURE 3 OF TALBOT A RING OSCILLATOR? THE ANSWER IS NO. NO ONE OF ORDINARY SKILL IN THE ART WOULD HAVE THOUGHT THAT. AND HERE'S SOME INDEPENDENT, CONTEMPORANEOUS EVIDENCE THAT SHOWS THAT.

SO YOU SEE RIGHT IN COLUMN 1, TALKING ABOUT THE PRIOR ART, "A VERY COMMONLY USED MOS OSCILLATOR CIRCUITS IS A RING OSCILLATOR WHICH HAS AN ODD NUMBER OF INVERTER STAGES CONNECTED IN A POSITIVE FEEDBACK LOOP, AS SHOWN IN FIGURE 1. THIS CIRCUIT OPERATES BY THE SWITCHING OF EACH INVERTER FROM ONE LOGIC STATE TO ANOTHER." AS WE'VE SEEN.

THEN HE TALKS ABOUT HIS INVENTION. WHICH IS A TYPE OF OSCILLATION CIRCUIT THAT HAS A SCHMITT TRIGGER. HE SAYS "THE CHARGING AND DISCHARGING OF THE CAPACITOR ELEMENT 50 IS UNDER CONTROL OF THE SWITCH 60 ACTING IN RESPONSE TO THE OUTPUT

OF THE SCHMITT TRIGGER CIRCUIT. IN THIS MANNER, THE OUTPUT OF THE SCHMITT TRIGGER ITSELF GENERATES A PRECISE OSCILLATING SIGNAL WHOSE PERIOD IS SUBSTANTIALLY INDEPENDENT OF VARIATIONS IN THE POWER SUPPLY."

SO IT'S BASICALLY EXACTLY WHAT DR. OKLOBDZIJA SAID IN HIS DECLARATION; YOU CAN OSCILLATE WITH JUST A SCHMITT TRIGGER, AND IT'S A FUNDAMENTALLY DIFFERENT TYPE OF OSCILLATOR.

SO I THINK -- OH, YEAH. JUST TO WRAP UP ON RING OSCILLATOR, THEY WANT TO ALSO ADD "VARIABLE BASED ON TEMPERATURE, VOLTAGE AND PROCESS." BUT AS WE'VE SEEN, THE CLAIMS ALREADY INCLUDE THAT. I MEAN, BASICALLY THEY WANT TO BE REDUNDANT, AND MAKE THINGS MORE CONFUSING AND TRY TO ADD, YOU KNOW, SOMETHING --

THE COURT: NOW, ON THIS POINT I READ, AT LEAST FROM THE PAPERS, IT STRUCK ME THAT THE PARTIES DON'T REALLY DISAGREE THAT THE CLAIMS ARE SO LIMITED. IT'S JUST HOW WE'VE GOT TO INSTRUCT THE JURY AND MOVE FORWARD ON THAT PRINCIPLE.

MR. OTTESON: I THINK THAT'S RIGHT. BUT, YOU KNOW, IN INSTRUCTING THE JURY THE CLAIMS SAY WHAT THEY SAY. INCLUDING A DISCUSSION OF, YOU KNOW, TEMPERATURE, VOLTAGE AND PROCESS.

THE COURT: YEAH, OKAY.

MR. OTTESON: SO WE WOULD SUBMIT THAT JUDGE WARE GOT IT RIGHT. AND THAT ALL OF THIS EXTRINSIC EVIDENCE ABOUT TALBOT VERSUS A RING OSCILLATOR IS REALLY NOT EVEN NEEDED TO

CONSTRUE THE CLAIMS. BUT, IN ANY EVENT, IT ALSO SUPPORTS OUR POSITION.

THE COURT: ALL RIGHT. THANK YOU VERY MUCH.

MR. OTTESON: THANK YOU, YOUR HONOR.

THE COURT: WHO'S UP?

MS. KEEFE: YOUR HONOR, WOULD YOU MIND IF WE TOOK A QUICK BREAK. I WILL GET SOME WATER AND THEN WE CAN START UP.

THE COURT: I WOULDN'T MIND AT ALL.

WHY DON'T WE TAKE FIVE MINUTES AND THEN GET BACK AT IT.

MS. KEEFE: THANK YOU.

(WHEREUPON, SHORT BREAK WAS HAD.)

THE COURT: MS. KEEFE, ARE YOU READY TO GO?

MS. KEEFE: AS READY AS I CAN BE, YOUR HONOR. USUALLY, I'M NOT THE HARD ONE TO HEAR.

THE COURT: WHY DON'T YOU GO AHEAD.

MS. KEEFE: I APOLOGIZE ALREADY FOR COUGHING THROUGHOUT THE PRESENTATION.

BUT, I HAVE TO ADMIT I WAS A LITTLE SURPRISED SITTING HERE LISTENING TO THE ARGUMENT BECAUSE WHAT I AM HEARING THE PATENTEE SAY IS THAT THEY THINK THAT "RING OSCILLATOR" HAS ALREADY BEEN CONSTRUED. BUT JUDGE WARE VERY CLEARLY SAID, I'M GOING TO WAIT TO CONSTRUE RING OSCILLATOR UNTIL AFTER I'VE HEARD FROM YOU GUYS ABOUT THE SCOPE, POSSIBLY OF THE DISCLAIMER. AND WHETHER OR NOT WE NEED TO MAKE SURE TO

DEFINE RING OSCILLATOR IN A WAY THAT KEEPS THE PRIOR ART OUT, THAT SHOWS WHAT THE PATENTEE WAS ACTUALLY DISTINGUISHING HIMSELF FROM.

AND WE HAVE ONE -- THESE ARE JUST LAW SLIDES, I KNOW YOUR HONOR KNOWS ALL THAT -- BUT WE HAVE ONE OF THOSE TYPES OF PATENTS WHERE THE SPECIFICATION DOES ONLY HAVE ONE EXAMPLE OF AN EMBODIMENT. THERE'S ONLY ONE EMBODIMENT IN THE SPECIFICATION FOR THIS RING OSCILLATOR THAT WE'RE TALKING ABOUT.

IT IS A VARIABLE SPEED RING OSCILLATOR. AND THAT'S DISTINGUISHED FROM ALL OF THESE "FIXED" OR "CONTROLLED." THERE'S A LOT OF TALK ABOUT WELL, WAIT A MINUTE, THE WORD "CONTROLLED" ONLY APPEARS ONCE, OR MAYBE THREE OR FIVE TIMES. BUT CONTROLLED IS THE SAME AS FIXED.

IT'S WHERE YOU PUT SOME FORM OF A CONTROL ON IT; WHERE YOU HOLD SOMEBODY BACK, LIKE WE SAW IN THE TUTORIAL. WHERE YOU ACTUALLY PUT A DAMPER ON THE CLOCK TO MAKE SURE THAT IT DOESN'T RUN TOO FAST, SO IT DOESN'T BREAK.

AND WHAT WE SEE IN FIGURE 17 OF THE '336 PATENT, IS THE RING OSCILLATOR -- THROUGHOUT THE REST OF THE SPECIFICATION IT'S DEFINED AS RING OSCILLATOR 430 -- EVEN TELL US, IT'S A RING OSCILLATOR VARIABLE SPEED CLOCK. IT'S NOT A FIXED OR CONTROLLED CLOCK, LIKE A VOLTAGE CONTROLLED OSCILLATOR, OR FREQUENCY CONTROLLED OSCILLATOR, IT IS A RING OSCILLATOR VARIABLE SPEED.

AND JUST IN CASE WE DON'T KNOW EXACTLY WHAT THAT MEANS FROM LOOKING AT THE FIGURE, THE SPECIFICATION THROUGHOUT COLUMN 16 AND ON INTO 17 MAKES PRETTY CLEAR FOR US WHAT THAT IS.

AND ON THIS SLIDE, I'VE JUST GOT THE POSITIVE STUFF ABOUT THE RING OSCILLATOR RUNNING FREE. BUT IF YOU LOOK UP JUST ONE PARAGRAPH, IN COLUMN 16, RIGHT ABOVE THIS, THE PATENTEE TALKS ABOUT THE FACT THAT IT'S BAD TO CONTROL THESE THINGS BECAUSE YOU'RE NOT LETTING THE CHIP RUN AS FREELY AND AS FAST AS IT COULD.

IT TALKS ABOUT THE FACT THAT WE WOULD LIKE TO BE ABLE TO RUN THINGS AS QUICKLY AS WE COULD INSTEAD OF CONTROLLING THEM. INSTEAD OF HOLDING THEM BACK. AND SO INSTEAD WE, IN THIS PATENT, ARE USING THE FAMILIAR RING OSCILLATOR -- AND I'M LOOKING HERE AT COLUMN 16, STARTING AT LINE 54, THIS IS A LITTLE BIT LOWER -- BUT STARTING AT LINE 54, THE MICROPROCESSOR USES THE TECHNIQUES SHOWN IN FIGURE 17, WHICH WE JUST LOOKED AT, THROUGH 19 TO GENERATE THE SYSTEM CLOCK AND ITS REQUIRED PHASES. CLOCK CIRCUIT 430 IS THE FAMILIAR, QUOTE, RING OSCILLATOR, END QUOTE.

SO THEY'RE TRYING TO TELL YOU, THIS THING IS GOING TO BE SPECIAL THIS, QUOTE UNQUOTE, RING OSCILLATOR, WHICH IS USED TO TEST PERFORMANCE, JUST LIKE WE HEARD FROM THE PATENTEE. RING OSCILLATORS ARE SUPPOSED TO BE SITTING THERE TO RUN AS FREELY AS THEY CAN SO THAT THEY CAN TEST PERFORMANCE. BUT

WE'RE GOING TO CHANGE THAT AND PUT THIS RING OSCILLATOR ON THE CHIP, SO THAT IT CAN VARY WITH THE ENVIRONMENT. AT ROOM TEMPERATURE, THE FREQUENCY WILL BE IN THE NEIGHBORHOOD OF 100 MEGAHERTZ, 70 DEGREES CENTIGRADE THE SPEED WILL BE 50.

THE RING OSCILLATOR IS USEFUL AS A SYSTEM CLOCK WITH ITS STAGES PRODUCING PHASE 0 TO PHASE 3 OUTPUTS BECAUSE ITS PERFORMANCE TRACKS THE PARAMETERS WHICH SIMILARLY AFFECT ALL OTHER TRANSISTORS ON THE SAME SILICON DIE.

SO IT'S GREAT TO USE THIS VARIABLE SPEED RING OSCILLATOR BECAUSE IT IS ALLOWED TO RUN FREELY. IT'S ALLOWED TO GO AS FAR AS IT CAN.

AND THE INVENTOR SAID YEAH, I DO THINK THAT THE RING OSCILLATOR IN THE '336 IS FREE RUNNING. SO IT IS NOT CONTROLLED. FREE RUNNING MEANS I LET YOU GO. I LET YOU DO WHATEVER YOU'RE GOING TO DO. I DIDN'T CONSTRAIN YOU. IT'S NOT "FIXED", "CONTROLLED." THESE ARE THE TYPES OF WORDS THAT CAN BE USED INTERCHANGEABLY, BUT "CONTROLLED" IS A VERY SIMPLE ONE THAT I THINK THE JURY WILL BE ABLE TO UNDERSTAND

THE COURT: NEVERTHELESS, IF I UNDERSTAND YOUR POSITION THEN, YOU'RE NOT WED TO "CONTROLLABLE" OR "NON-CONTROLLABLE." YOU JUST WANT TO GET THIS NOTION THAT IT IS FIXED; THAT IT IS NOT FIXED; THAT IT CAN RUN FREE.

SO IF I WERE TO ADOPT ANY ONE OF THESE ALTERNATIVE TERMS TO ACCOMPLISH THAT OBJECTIVE WOULD YOU HAVE A BIG PROBLEM WITH THAT?

MS. KEEFE: IT'S HARD FOR ME TO ANSWER THAT IN THE ABSTRACT; DEPENDING ON WHAT YOUR HONOR WAS GOING TO CHOSE.

THE COURT: LET'S TALK ABOUT "FREE RUNNING" FOR EXAMPLE.

MS. KEEFE: AGAIN, I THINK "FREE RUNNING" ACTUALLY COULD, YOU KNOW, WOULD BE VERY GOOD FOR US. I WOULD BE HAPPY WITH FREE RUNNING BECAUSE IT PUTS IN, AGAIN, THE NOTION THAT IT'S NOT TIED DOWN; IT'S ALLOWED TO RUN FREE. AND THAT'S ANOTHER WAY OF SAYING "NOT CONTROLLED."

SO TO ANSWER YOUR QUESTION, THE ANSWER IS YES. THERE ARE OTHER WAYS TO GET AT THE SAME NOTION. BUT IT DOES HAVE TO BE THE NOTION THAT ONE IS ALLOWED TO GO HOWEVER IT WANTS, AND ONE IS NOT. IT IS CONSTRAINED IN SOME WAY.

AND AS YOU'VE ALREADY ASCERTAINED, THERE'S, THE REASON WE'RE NOT GOING WITH THE WORD "VARIABLE" IS BECAUSE THERE'S ALREADY AN ARGUMENT ABOUT HOW MUCH VARIANCE IS ENOUGH OR HOW MUCH ISN'T. WHICH IS WHY WE LOOKED FOR A WORD LIKE "CONTROLLABLE".

"FREE RUNNING" WOULD WORK. SOMETHING ALONG THOSE LINES.

THE COURT: OF COURSE, I DON'T SEE FREE RUNNING ANYWHERE IN THE WRITTEN DESCRIPTION EITHER.

MS. KEEFE: EXACTLY.

BUT WHAT YOU DO SEE IS THAT IT'S NOT THE CRYSTAL CLOCK. IT'S NOT THOSE OTHER FIXED CLOCKS OF THE PAST. AND

THAT'S THE PORTION IN COLUMN 16 THAT WE WERE JUST LOOKING AT. NOT HELD BACK THE WAY THAT ALL OF THE PRIOR CHIPS WERE, WHERE THEY HAD AN OFF-CHIP CLOCK THAT REGULATED WHAT WAS HAPPENING.

THAT MIGHT BE ANOTHER ONE, "REGULATED." I'M NOT SURE THAT'S IN ANY OF THE --

THE COURT: LET'S GO BACK TO THE LANGUAGE YOU'VE PROPOSED AND SEE, SEE WHERE IT TAKES US.

SO AS I UNDERSTAND IT, YOU WANT BOTH THE NON-CONTROLLABLE AND VARIABLE BASED ON LANGUAGE INCLUDED. IN SOME WAYS, ISN'T THE LATTER CLAUSE REDUNDANT OF THE FIRST? THAT IS ISN'T A OSCILLATOR THAT IS VARIABLE BASED ON WHATEVER CRITERIA, BY DEFINITION, NOT CONTROLLED OR NOT FIXED?

MS. KEEFE: I WOULD PROBABLY ANSWER YES TO THAT. THE REASON WE HAVE THEM BOTH IN THERE IS BECAUSE THAT'S WHAT THE PATENTEE SAID. THAT'S HOW THE PATENTEE DISTINGUISHED THE TALBOT VOLTAGE CONTROLLED OSCILLATOR.

THE COURT: THAT'S WHAT THE EXAMINER SAID THE PATENTEE SAYS.

MS. KEEFE: CORRECT. BUT I ACTUALLY BELIEVE, QUITE THE CONTRARY TO WHAT PATENTEE SAYS, THEY DID NOT CORRECT THAT. INSTEAD THEY USE THE WORD "FEATURES" KIND OF REFERRING BACK TO THE FEATURES THAT WERE DESCRIBED IN THE INTERVIEW.

THE COURT: SO YOU WOULD SAY I'M, MY VAGUE MEMORY WAS NOT ENTIRELY WRONG; THAT YOU DO HAVE THE OPPORTUNITY TO MAKE CORRECTIONS IN THE SUMMARY?

MS. KEEFE: ALWAYS. YES, YOUR HONOR. ABSOLUTELY.

AND ONE OF THE OTHER REASONS THAT WE USE THE WORD CONTROLLED IS BECAUSE IT DOES APPEAR SO OFTEN REGARDING SOME OF THE PRIOR ART CLOCKS THAT WE'RE GOING TO BE DISTINGUISHING FROM, OR THE PRIOR OSCILLATORS.

FOR EXAMPLE, DURING THE ORIGINAL -- SO WE TALKED ABOUT THE SPECIFICATION. ONLY ONE EMBODIMENT, IT'S THE ONLY ONE, AND IT'S MEANT TO BE THIS FREE RUNNING, VARIABLE RING OSCILLATOR. WHEN WE GO BACK AND LOOK AT THE ORIGINAL PROSECUTION HISTORY, ONE OF THE THINGS THAT THEY WERE, ONE OF THE PIECES OF PRIOR ART THAT WAS BEING DISTINGUISHED OVER WAS THE MAGAR REFERENCE.

AND THE MAGAR REFERENCE ACTUALLY DOES DESCRIBE THE FACT THAT THIS CRYSTAL CLOCK, IN MAGAR, IS FREQUENCY CONTROLLED. AND, AGAIN, THEY USE THE WORD "CONTROLLED." AND THE MAGAR MICROPROCESSOR IS FREQUENCY CONTROLLED BY A CRYSTAL.

THEY ACTUALLY GO ON TO DEFINE THAT THE REASON WE USE CRYSTALS IS BECAUSE THEY ACTUALLY CAN ONLY PRODUCE ONE OUTPUT AT ONE SPECIFIC FREQUENCY, AND THAT'S WHY YOU WOULD WANT TO USE THEM. BECAUSE THEY TIGHTLY CONTROL HOW THINGS MOVE.

SO, IN THE SENTENCE THAT'S NOT HIGHLIGHTED, CRYSTALS ARE BY DESIGN FIXED FREQUENCY DEVICES WHOSE OSCILLATION SPEED IS DESIGNED TO BE TIGHTLY CONTROLLED.

AND THEY'RE SAYING THE MAGAR MICROPROCESSOR IN NO WAY CONTEMPLATES A VARIABLE SPEED CLOCK AS CLAIMED. SO THEY'RE

SAYING OKAY, WAIT, WITH A CRYSTAL CLOCK WE'RE CONTROLLED. WITH A CRYSTAL CLOCK WE CAN'T DO ANYTHING ON A VARIABLE SPEED BECAUSE THE CRYSTAL TELLS US HOW FAST WE CAN GO. AND THAT IS NOT THE VARIABLE SPEED CLOCK THAT'S CLAIMED.

MAGAR, ACTUALLY, THROUGHOUT THE REST OF THE, YOU GO FARTHER DOWN ON PAGE FOUR, IN THE MAGAR REFERENCE, IT ACTUALLY TALKS ABOUT THE FACT THAT THESE WERE SEPARATE, ONE OFF-CHIP, ONE ON-CHIP IN THE WAY THAT THEY WERE DESCRIBED. BUT HE SAID, EVEN IF THEY WERE ON THE SAME CHIP, AS PREVIOUSLY MENTIONED, CRYSTALS ARE DESIGNED, FIXED FREQUENCY DEVICES. AND THAT'S NOT WHAT WE ARE. WE ARE SOMETHING VERY DIFFERENT FROM THAT BECAUSE WE HAVE VARIABLE SPEED CLOCKS.

SO MAGAR ACTUALLY DOES CONTEMPLATE EXACTLY WHAT GOES ON HERE. IT'S NOT JUST ONE OFF, ONE ON, AND THAT'S ALL THAT MATTERS. MAGAR SAYS HEY, EVEN IF YOU PUT THEM ON THE SAME CHIP, IF YOU'VE GOT A CRYSTAL, THAT'S CONTROLLED, AND THAT'S NOT US. BECAUSE WHAT WE ARE IS A VARIABLE SPEED CLOCK. AND THAT WAS WHAT THEY USED TO OVERCOME MAGAR.

YOU SEE HERE, CRUCIAL TO THE PRESENT INVENTION IS THAT SINCE BOTH THE OSCILLATOR OR VARIABLE SPEED CLOCK, SO THEY'RE SAYING THE RING OSCILLATOR IS A VARIABLE SPEED CLOCK, THEY'RE GIVING YOU A DEFINITION THERE, AND DRIVEN DEVICE ARE ON THE SAME SUBSTRATE, THEY CAN VARY TOGETHER. AUTOMATICALLY VARY TOGETHER. SO THAT WAS THE DISTINGUISHING FOR MAGAR.

THE COURT: OKAY. AND SO ON THIS POINT, TO MAKE

SURE I FOLLOW EVERYTHING YOU'RE SAYING, WHEN YOU SAY NON-CONTROLLABLE, WHAT YOU ARE MEANING IS IT DOESN'T HAVE EITHER AN EXTERNAL CRYSTAL OR COMMAND INPUT OR SOME KIND OF CONTROL SIGNAL OR ANYTHING ELSE WHICH IS FIXING?

MS. KEEFE: CORRECT. CORRECT.

THE COURT: OKAY.

MS. KEEFE: AND THIS GOES TO THAT NOTION, AS YOUR HONOR HAS ALREADY HEARD, ABOUT FIXED FOR A GIVEN PURPOSE. YEAH, THERE MAY BE A LITTLE WIGGLE, BUT IT'S STILL FIXED. FOR IT'S PURPOSE, IT MIGHT GO A LITTLE HIGHER OR A LITTLE LOWER, LIKE A CRUISE CONTROL, BUT IT'S STILL FIXED.

AS WE GO ON, SO THE EXAMINER SAYS OKAY, I GET IT, MAGAR IS DIFFERENT. IT'S GOT ITS FIXED CRYSTAL CLOCK; ITS CONTROLLED CRYSTAL CLOCK. HOW ABOUT SHEETS? SHEETS IS WHAT YOU ARE. AND SO IT REJECTS THE CLAIMS OVER SHEETS.

BUT TO DISTINGUISH OVER SHEETS, PATENTEE SAID, WAIT A MINUTE IT, SHEETS HAS A VOLTAGE-CONTROLLED OSCILLATOR. IT'S THAT PHRASE WE KEEP TALKING ABOUT WITH TALBOT.

SO THE VOLTAGE-CONTROLLED OSCILLATOR IS NOT -- THEY FIRST SAY OKAY, THEY'RE SEPARATE FROM EACH OTHER, BUT SHEETS HAS PROPOSED A TECHNIQUE FOR ADJUSTING THE FREQUENCY OF THE VCO IN ACCORDANCE WITH THE DESIRED FREQUENCY. LIKE YOUR HONOR JUST POINTED OUT, HAVING SOME KIND OF CONTROL IN THERE; SOME SIGNAL, SOME MANNER TO CHANGE THE FREQUENCY OF THAT VCO.

SO INSTEAD OF, YOU KNOW, OPERATING AT X, WE'RE

GOING TO CHANGE IT TO OPERATE AT Y, BUT WE'RE STILL GOING TO HOLD IT AT Y.

THE PATENTEE WENT ON --

THE COURT: LET'S GO BACK TO THE PREVIOUS SLIDE. THE SECOND POINT YOU UNDERLINE THERE IS ALSO, I THINK, IMPORTANT TO DISCUSS.

MS. KEEFE: YES.

THE COURT: IT'S THAT THEY'RE, IN THE SHEETS APPROACH, AND MANY OTHERS LIKE IT BEFORE, THERE WAS SOME PRECONCEIVED OBJECTIVE OR DESIRED OPERATING FREQUENCY THAT WAS THEN UNDER SOME METHOD SHEET PROPOSED, I DON'T KNOW WHAT THAT IS.

MS. KEEFE: YES.

THE COURT: COULD THEN BE ACHIEVED, BUT THAT WAS THE DIFFERENCE.

MS. KEEFE: EXACTLY RIGHT. AND, AGAIN, IT GOES BACK TO WHAT WE TALKED ABOUT BEFORE. YOU HAD TO FIGURE OUT WHAT THE WORST CASE SCENARIO OF THE CHIP WAS, AND THEN MAKE SURE YOU HOLD IT DOWN TO THAT. AS OPPOSED TO ALLOW IT TO FREELY RUN. YOU DON'T HAVE A DESIRED -- THE ONLY DESIRE YOU HAVE IS FOR IT TO GO AS FAST AS POSSIBLE.

THE PATENTEE WENT ON -- THIS IS ON THE VERY NEXT PAGE IN THE SHEETS RESPONSE -- THE PRESENT INVENTION DOES NOT SIMILARLY RELY UPON THE PROVISION OF FREQUENCY CONTROL INFORMATION TO AN EXTERNAL CLOCK. THE SHEETS SYSTEM FOR

PROVIDING CONTROL SIGNALS IS UNRELATED TO THE PRESENT INVENTION.

AND, AGAIN, I WILL ADMIT THAT SHEETS WAS OFF CLOCK VERSUS -- SORRY, OFF-CHIP VERSUS ON. BUT IT'S THAT NOTION STILL CONSTANTLY OF DISTINGUISHING HOLDING SOMETHING BACK VERSUS LETTING IT RUN FREE.

THEN WE COME TO THE RE-EXAMINATION. AND IN THE RE-EXAMINATION, WE'VE ALL SEEN THIS BEFORE, THIS IS THE STATEMENT THAT THE EXAMINER SAYS, THE PATENT OWNER DISCUSSED THE FEATURES OF A RING OSCILLATOR, SUCH AS BEING NON-CONTROLLABLE, AND BEING VARIABLE BASED ON THE ENVIRONMENT.

AND THAT'S WHERE WE GRABBED OUR LANGUAGE FROM, WAS RIGHT HERE. THE PATENT OWNER ARGUED THAT THESE FEATURES, OF THE RING OSCILLATOR, SO THESE FEATURES OF A RING OSCILLATOR, DISTINGUISH OVER WHAT TALBOT TEACHES.

SO GOING INTO THE NEXT PAPER, GOING INTO THE NEXT FILING, THEY'RE ON THE SAME PAGE. I JUST TOLD YOU THAT THE FEATURES OF THE RING OSCILLATOR ARE THAT THEY'RE NON-CONTROLLABLE, AND THAT THEY'RE VARIABLE BASED ON THE ENVIRONMENT. AND THAT'S WHY I'M DIFFERENT FROM TALBOT. THAT'S WHY I CAN JUST USE THE SHORTHAND, I'M A RING OSCILLATOR, TALBOT IS NOT. BECAUSE WE NOW ALL UNDERSTAND THE LAY OF THE LAND; THAT THAT RING OSCILLATOR IS NON-CONTROLLABLE AND VARIABLE.

THE EXAMINER SAYS OKAY, WE'RE ON THE SAME PAGE. I'M GOING TO WAIT AND SEE WHAT YOU PUT. AND IF YOU ARE STILL

THERE, WE'LL GO FROM THERE.

SO, WHEN THE PATENTEE COMES BACK, HE TALKS ABOUT THE FACT THAT TALBOT DOES NOT DISCLOSE OR SUGGEST THE RING OSCILLATOR RECITED THERE. TALBOT DISCUSSES A VOLTAGE-CONTROLLED OSCILLATOR -- NOW DON'T FORGET, WE HAD JUST SAID THAT THE RING OSCILLATOR WAS NOT CONTROLLED. SO NOW WE'RE COMING BACK TO WAIT A MINUTE, TALBOT IS DIFFERENT BECAUSE IT IS CONTROLLED. SO WE ARE STILL ON THE SAME PAGE.

AND THERE IS NO WHERE, NO WHERE IN THIS RESPONSE THAT THE PATENTEE SAYS, BY THE WAY, YOU GOT IT WRONG. I REALLY DO WANT MY RING OSCILLATOR TO COVER CONTROLLED SUBSTANCES -- THAT SOUNDED VERY WRONG, BUT -- SO, THEY'RE ON THE SAME PAGE HERE.

THIS IS THE PATENTEE SAYING, YOU KNOW WHAT, THAT'S WHAT I MEANT. I MEANT THAT I DON'T HAVE THE FEATURES OF THAT RING OSCILLATOR.

SO WHAT I'M GOING TO DO NOW, ONE OF THE OTHER THINGS I HAD ON MY WHITE BOARD IN MY OFFICE WHEN I WAS TRYING TO FIGURE ALL THIS OUT, I HAD UP THERE, OKAY, SO, VOLTAGE-CONTROLLED OSCILLATOR VERSUS RING OSCILLATOR, WHAT IS THE DIFFERENCE BETWEEN THOSE TWO? WHAT DOES IT REALLY MEAN?

WELL, WE HAVE ALL AGREED, IN FACT THE ONLY PART OF WHAT JUDGE WARE DID WAS HE KIND OF TOOK WHAT WE BOTH AGREED ON, WE BOTH AGREED THAT THE OSCILLATOR HAS THESE ODD NUMBER OF INVERTERS, RIGHT?

THE COURT: AND YOU STILL AGREE.

MS. KEEFE: IN A LOOP. WE ALL STILL AGREE ON THAT.

OKAY. SO IF A RING OSCILLATOR IS AN OSCILLATOR WITH AN ODD NUMBER OF INVERSIONS ARRANGED IN A LOOP, AND A VOLTAGE-CONTROLLED OSCILLATOR CAN DO THE SAME THING, CAN TRULY BE AN ODD NUMBER OF INVERTERS ARRANGED IN A LOOP ITSELF, BUT HAS A SIGNAL COMING IN TO CONTROL ITS VOLTAGE, WHAT'S THE DIFFERENCE?

WELL, THE DIFFERENCE IS THAT WORD; ITS THE "C" PART. YOU EITHER HAVE A RING OSCILLATOR, VCO CAN BE RINGS, OR YOU HAVE AN "R" OSCILLATOR. THE DIFFERENCE BETWEEN VC AND R, THEY'RE BOTH RINGS, THEY'RE BOTH POTENTIALLY RINGS, IS THE "CONTROLLED" PART OF IT.

SO, RIGHT NOW, I'M GOING TO TURN OVER, PARTIALLY FOR MY VOICE, BUT ALSO BECAUSE DR. WALKER IS SMARTER THAN I AM ON THIS, TO TELL YOU A LITTLE BIT MORE SPECIFICALLY ABOUT THE TALBOT -- IN FACT, LET ME JUST SEE THE NEXT SLIDE BEFORE YOU DO THAT -- SORRY ABOUT THAT.

THIS, WHAT WE REALLY HAD, NEXT -- THERE. SO, WHAT WE REALLY HAD, IN FIGURE 3, OF TALBOT, HERE'S WHAT WE'RE TALKING ABOUT, WHAT JUDGE WARE ASKED US TO DO. AND, HONESTLY, ALL OF THIS MAKES SENSE WHEN YOU PUT IT IN LIGHT OF THE SPECIFICATION, IN LIGHT OF THE DISCLAIMER FOR MAGAR, THE DISCLAIMER FOR SHEETS, AND NOW THE DISCLAIMER FOR TALBOT IS WHAT IS THIS VCO? COULD IT BE, OR COVERED RATHER BY A

DEFINITION THAT DOES NOT SPECIFY THAT IT'S NON-CONTROLLABLE?

AND SO WITH THAT, I'D LIKE TO TURN IT OVER TO DR. WALKER.

THE COURT: THANK YOU.

MR. WALKER: YOUR HONOR, HERE IS THE SLIDE I'LL BE WORKING FROM.

AND JUST TO PUT THIS IN A LITTLE PERSPECTIVE, YOUR HONOR, I CAME HERE LOADED FOR BEAR TO TALK ABOUT THE TECHNICAL ASPECT OF TALBOT, AND WHAT IT DISCLOSES, AND DR. OKLOBDZIJA'S TESTIMONY, AND I FEEL A LITTLE BIT NOW LIKE I'M SHOOTING AT FLIES WITH A CANNON BECAUSE I'M NOT QUITE SURE THERE'S MUCH DISPUTE THAT TALBOT IS DISCLOSING THREE INVERTERS IN A LOOP, WHICH WAS THE ISSUE THAT JUDGE WARE REALLY WANTED US TO DISCUSS.

AND I THINK WE, I THINK DR. WOLFE'S DECLARATION MADE A PRETTY OVERWHELMING SHOWING OF THAT, AND I'M NOT SURE THAT DR. OKLOBDZIJA REALLY REBUTTED THAT AT ALL.

THIS IS THE FIGURE 1 FROM TALBOT. I JUST WANT TO MAKE THE POINT THAT TALBOT PRIOR ART IT'S A CPU CLOCK. IT'S CLOCKING A CPU AND IT'S ON CHIP. AND, OF COURSE, IT'S DISCLOSING OSCILLATOR.

LIKE ALL REAL CLOCKS, TALBOT'S CLOCK IS IMPERFECT. IT WILL VARY WITH ENVIRONMENTAL CHANGES. WE'RE GOING TO SEE HERE THAT DR. OKLOBDZIJA ADMITTED THAT TALBOT FIGURE 3 WOULD CHANGE FREQUENCY IN RESPONSE TO CHANGES IN TEMPERATURE,

OPERATING VOLTAGE OR PROCESS.

AND THIS IS INTERESTING BECAUSE WE JUST SAW THAT DURING THE RE-EXAMINATION OF THE '148, THE APPLICANT SAID NO, NO, NO, TALBOT DOES NOT VARY WITH THE ENVIRONMENT. AND HERE'S DR. OKLOBDZIJA CONTRADICTING THE ARGUMENT MADE TO THE EXAMINER IN THE '148. AND WE'LL GET TO THAT TESTIMONY.

THE REASON HE HAD TO SAY THAT IS BECAUSE THEIR POSITION IS GOING TO BE, AS WE GO FORWARD HERE, THAT IT'S THE VARIABILITY CAUSED BY THE IMPERFECTION OF THE PLL'S, AND THE EXTERNAL CLOCK THAT LEADS TO THE VARIABILITY THAT THEY NEED IN THE CLAIMS. THEY'RE GOING TO SAY THAT'S WHERE THE CLAIM LIMITATION IS MET.

BUT IT'S GOING TO BE OUR POSITION GOING FORWARD THAT TALBOT'S CRYSTAL AND PLL ARE STABLE ENOUGH TO MEET THE DESIGN GOALS FOR SYNCHRONOUS OPERATION. SO, REALLY, ONE OF ORDINARY SKILL IN THE ART WOULD CONSIDER THEM TO BE A FIXED CLOCK, NOT A VARIABLE CLOCK. BUT I JUST WANT TO MAKE THAT POINT HERE.

SO HERE WE ARE, DR. OKLOBDZIJA, AT THE DEPOSITION FOR THIS HEARING, "WILL IT CHANGE THE FREQUENCY IN FIGURE 3 WITH TEMPERATURE? FIGURE 3 IT'S THE FIGURE THAT SHOWS THE TALBOT --

THE COURT: YOU'RE TALKING ABOUT TALBOT FIGURE 3?

MR. WALKER: THAT'S THE TALBOT FIGURE 3.

"EVERYTHING CHANGES WITH TEMPERATURE."

FIGURE 3 OF TALBOT VARIES WITH MANUFACTURING PROCESS, "EVERYTHING THAT WE MANUFACTURE DEPENDS ON THE MANUFACTURING PROCESS. THAT'S A GENERAL STATEMENT, GENERALLY TRUE."

TALBOT FIGURE 3 WILL VARY WITH THE SUPPLY VOLTAGE. "NOW, EVERYTHING THAT IS DESIGNED ON THE CHIP DEPENDS ON THE SUPPLY VOLTAGE. IT IS BASICALLY THE NATURE OF THE PHYSICAL CHARACTERISTICS. SO IF I CHANGE VCC, EVERYTHING ON THIS DIE, INCLUDING TALBOT, WOULD CHANGE THEIR SPEED.

SO THIS IS DIRECTLY CONTRARY TO WHAT THEY TOLD THE EXAMINER. THEY SAID NO, NO, NO, TALBOT DOESN'T -- OUR RING OSCILLATOR VARIES WITH THE ENVIRONMENT, TALBOT DOES NOT. THIS IS DIRECTLY CONTRARY NOW. THEY'RE GOING TO CHANGE POSITIONS ON THIS.

HERE ARE THE TWO DEFINITIONS, JUST AGAIN.

AGAIN, HERE IS THE DISTINCTION THEY'RE MAKING, TALBOT DOES NOT TEACH A RING OSCILLATOR, THE FEATURES BEING NON-CONTROLLABLE AND VARIABLE BASED ON THE ENVIRONMENT. DIRECTLY, YOU KNOW, AGAIN, CONTRADICTING THE, THEIR EXPERT'S TESTIMONY.

AND HERE, AGAIN, SUPPOSEDLY WE'RE HERE TO FIND OUT FROM A TECHNICAL STANDPOINT WHETHER THE VCO AND TALBOT IS OR IS NOT A RING OSCILLATOR.

AND HERE IS FIGURE 3. AND THOSE ARE THREE INVERTERS THAT DR. WOLFE, THIS WAS RIGHT OUT OF DR. WOLFE'S

DECLARATION, HE SAYS THESE ARE THREE INVERTERS HE IDENTIFIES. NO REAL ARGUMENT ABOUT THIS. PATENT CALLS THIS INVERTER 51.

AND THIS IS A, THIS IS VERY SIMPLIFIED ANIMATION OF THIS. I'LL TALK A BIT ABOUT THE SIMPLIFICATION HERE. WE'RE SIMPLIFYING, WHAT WE'RE SIMPLIFYING IS THE VALUE OF 1 AND 0 HERE. BUT GO AHEAD AND RUN THIS.

AND I JUST WANT TO SHOW THE COURT -- GO AHEAD, RUN THROUGH AS FAST WE CAN -- WHAT IS GOING TO HAPPEN HERE, THE SIGNAL IS GOING TO OSCILLATE. THESE INVERTERS ARE GOING TO INVERT THE SIGNALS IN JUST THE SAME WAY AS THAT RING OSCILLATOR. IT'S GOING TO WORK JUST THE SAME WAY.

NOW, I SAID THE SIMPLIFICATION IS IN THE 1'S AND 0'S. BECAUSE WHAT TALBOT DOES IS IT USES THESE CAPACITORS HERE TO CHARGE AND DISCHARGE IN THIS PART OF THE LOOP. AND THE TIME IT TAKES TO CHARGE AND DISCHARGE SLOWS THINGS DOWN A LITTLE BIT. IT TAKES A LITTLE WHILE, IT TAKES A LITTLE WHILE TO CHARGE UP FROM 0 TO 1. IT TAKES A LITTLE WHILE TO DISCHARGE FROM 1 TO 0. AND THAT SLOWS THINGS DOWN. IT'S A CONTROL ELEMENT.

AND WHEN YOU READ THE TECHNICAL ARGUMENTS BEING MADE BY DR. OKLOBDZIJA, ONE WAY OR THE OTHER, THEY'RE TALKING ABOUT THE CONTROL ASPECTS OF TALBOT. LET'S MOVE ON.

AND SO, INVERTER 51, DEFINITELY AN INVERTER. THIS TRANSISTOR PAIR, RECOGNIZED BY DR. OKLOBDZIJA'S TEXTBOOK, IT'S THE SAME -- AND I CAN DISCUSS HOW THIS WORKS, IF THE COURT IS

INTERESTED -- BUT THIS IS THE SAME BASIC CONFIGURATION, SLIGHTLY DIFFERENT SYMBOLOGY. BUT IT'S, IT'S THESE TWO, YOU'LL SEE THE LITTLE BUBBLE THERE ON THE TRANSISTOR GATES, HERE AND HERE; NO BUBBLE HERE, NO BUBBLE HERE.

THIS IS THE HIGHER VOLTAGE. THE HIGHER VOLTAGE IS UP HERE. THIS IS GROUND DOWN HERE. THIS IS GROUND DOWN HERE. AND IT'S THE SAME ARRANGEMENT.

AND WHAT HAPPENS IS ONE OF THESE TURNS ON. THE OTHER IS OFF. AND, WHEN THE INPUT CHANGES, THEY FLIP FLOP. AND THEY EITHER CONNECT TO GROUND, OR THEY CONNECT TO HI VOLTAGE. AND THAT'S, IT'S THAT FLIP FLOPPING THAT CAUSES THE INVERSION.

AND SCHMITT TRIGGER 52, ALSO AN INVERTER. THIS COMES OUT OF DR. OKLOBDZIJA' DECLARATION THAT HE SUBMITTED FOR THIS HEARING. THIS IS EXHIBIT A. THIS IS THE THIRD SLIDE OF EXHIBIT A. SCHMITT TRIGGER INVERTER, THE QUESTION IS WHETHER OR NOT THOSE OF SKILL IN THE ART CALL THESE THINGS INVERTERS; WELL, OF COURSE THEY DO.

THIS IS EXACTLY THE SAME SYMBOL AS TALBOT FIGURE 3 USES FOR SCHMITT TRIGGER 52, AND THAT LABEL THERE IS, I THINK WE'VE BLOWN THIS UP A LITTLE BIT, SCHMITT TRIGGER INVERTER.

AND, AGAIN, DR. OKLOBDZIJA'S OWN DIAGRAM SHOWS THAT THE OUTPUT OF A SCHMITT TRIGGER IS INTENDED TO BE A NICE SQUARE WAVE. VERY SIMILAR TO THE SQUARE WAVES FROM FIGURE 19 OF THE PATENT THAT ARE THE OUTPUT OF THE RING OSCILLATOR.

THE COURT: SO IF I COULD JUST STOP YOU THERE FOR A SECOND.

MR. WALKER: YES.

THE COURT: AND MOVE YOU UP A LITTLE BIT.

SO IS YOUR BASIC POINT HERE THAT THERE IS NO REAL DISPUTE THAT THE TALBOT SCHMITT TRIGGER, I'LL USE THAT PHRASE, IS COMPRISED OR INCLUDES MULTIPLE ODD NUMBER OF INVERTERS IN A LOOP.

MR. WALKER: THE SCHMITT TRIGGER ITSELF DOESN'T. TALBOT, TALBOT FIGURE 3. THIS IS TALBOT FIGURE 3. THE SCHMITT TRIGGER IS A COMPONENT.

THE COURT: UNDERSTOOD.

MR. WALKER: SO THIS ONE, TWO, THREE INVERTERS, THAT'S OUR BASIC POINT. WHETHER OR NOT THIS IS A RING OSCILLATOR DEPENDS ON HOW YOU DEFINE RING OSCILLATOR.

THE COURT: SO ARE YOU ARGUING THEN IN TALBOT FIGURE 3 THAT THE SCHMITT TRIGGER IS ONE OF THE, ONE OF THE MULTIPLE ODD INVERTERS?

MR. WALKER: IT'S ONE OF THE MULTIPLE ODD INVERTERS. THAT'S OUR ONLY POINT ON THE SCHMITT TRIGGER REALLY.

THE COURT: BUT IF YOU GO BACK TO THE SLIDE YOU WERE JUST SHOWING ME THERE FOR A MOMENT, THERE'S CERTAINLY A DISTINCTION DRAWN IN FIGURE 3 OR THE DISCUSSION AROUND FIGURE 3 BETWEEN A SCHMITT TRIGGER AND AN INVERTER. IT'S, WHEN IT

CHARACTERIZES ELEMENT 51, IT'S CALLING IT AN INVERTER, RIGHT?

MR. WALKER: YES. BUT THOSE OF ORDINARY SKILL IN THE ART UNDERSTAND IT BECOMES A LITTLE, THE LITTLE BUBBLE HERE ON THE END, THAT MEANS THERE'S AN INVERSION FUNCTION GOING ON HERE. THAT'S WHAT THE LITTLE BUBBLE MEANS.

THE COURT: HOW DO YOU KNOW THAT WITHOUT BEING ONE OF ORDINARY SKILL IN THE ART?

MR. WALKER: ONE OF ORDINARY SKILL IN THE ART KNOWS THAT THAT'S WHAT THE BUBBLES ARE. AND I THINK THAT'S EXPLAINED IN DR. WOLFE'S DECLARATION. I THINK HE ACTUALLY EXPLAINS THAT. HE EXPLAINS THE SYMBOLS.

BUT YOU SEE THE LITTLE BUBBLE HERE, AND NOT THE BUBBLE HERE, AND THAT'S, AGAIN, BECAUSE THESE ARE OPPOSITE POLARITY TRANSISTORS.

THE COURT: OKAY.

MR. WALKER: AND, AGAIN, THOSE OF ORDINARY SKILL IN THE ART, DR. OKLOBDZIJA HAD TROUBLE FINDING A DISCUSSION OF SCHMITT TRIGGERS THAT DIDN'T CALL THIS SYMBOL AN INVERTER. THIS SYMBOL IS AN INVERTER. THE SCHMITT TRIGGER INVERTER.

RIGHT THERE, IT'S CAPTIONED AS AN INVERTER.

THE COURT: AND IS YOUR POINT ON THIS SLIDE SIMPLY THAT ONE WAY TO UNDERSTAND WHETHER THE SCHMITT TRIGGER IS AN INVERTER OR NOT IS TO ASK WELL, WHAT DO INVERTERS OUTPUT; AND WHAT DOES THE SCHMITT TRIGGER OUTPUT?

MR. WALKER: THAT'S CORRECT, YOUR HONOR.

AND KIND OF THE PURPOSE OF THE SCHMITT TRIGGER IS TO TAKE SOMETHING THAT'S NOT QUITE SQUARE LIKE THIS, AND TURN IT INTO A SQUARE WAVE. THAT'S ONE OF THE THINGS IT ACCOMPLISHES THERE.

IT'S ALSO -- IF WE GO BACK HERE -- A STANDARD INVERTER IS SENSITIVE TO NOISE ON THE OUTPUT. THIS IS THE INPUT; THIS IS THE OUTPUT. THESE JAGGED THINGS HERE HAPPEN NEAR THE -- THIS HAS A SINGLE THRESH HOLD. AS YOU GET CLOSE TO THAT SINGLE THRESH HOLD, IF THERE'S NOISE ON THE LINE YOU'LL GET BOUNCING UP AND DOWN.

THE DOUBLE, THE DOUBLE THRESHOLD OF THE SCHMITT TRIGGER GIVES YOU ENOUGH SPACING BETWEEN THE THRESH HOLD POINTS GOING UP AND GOING DOWN THAT YOU DON'T GET NOISE ON THE OUTPUT. AND, AGAIN, THAT'S EXPLAINED IN DR. WOLFE'S DECLARATION.

THE COURT: ALL RIGHT.

MR. WALKER: DR. OKLOBDZIJA'S DECLARATION IS NOT ANALYZING TALBOT FIGURE 3. THIS IS NOT FIGURE 3 OF TALBOT. IT'S GOT AN INVERTER, I WOULD SAY. IT'S GOT ONE INVERTER. TALBOT HAS THREE.

AND, AGAIN, IF THE DEFINITION OF RING OSCILLATOR IS SIMPLY GOING TO BE THREE INVERTERS IN A LOOP OR THREE INVERSIONS IN A LOOP, THEN THE SCHMITT TRIGGER IS, CAN BE ONE OF THOSE INVERTERS -- THAT'S ALL. AND TALBOT MEETS THAT.

SOME OF THIS, I'M NOT SURE HOW MUCH OF THIS GOT INTO THE BRIEFING, I DIDN'T HEAR ANY OF IT IN THE ARGUMENT

TODAY, BUT I JUST WANT TO MAKE CLEAR THAT THE PATENTS DON'T PRECLUDE OR LIMIT THE KIND OF INVERTER THAT COULD BE USED.

SO THEY DON'T PRECLUDE RELAXATION OSCILLATORS, AND THEY DON'T PRECLUDE USING INVERTERS THAT CAN BE USED TO MAKE SINGLE INVERTER OSCILLATORS. THEY JUST DON'T PRECLUDE THAT.

AND, AGAIN, DR. WOLFE'S DECLARATION EXPLAINS THAT INVERTER 51, THAT SYMBOL IS A VERY GENERAL SYMBOL. IT CAN STAND FOR A LOT OF DIFFERENT STRUCTURES.

THE COURT: IT'S A GENESIS. IT'S NOT A SPECIES.

MR. WALKER: CORRECT, YOUR HONOR.

THE DISTINCTION THAT'S BEING MADE, THE ONLY DISTINCTION THAT CAN BE MADE AT THIS POINT IS THAT TALBOT IS CONTROLLED. THERE'S A CONTROLLED VOLTAGE 43 THAT COMES IN HERE, AND THESE CAPACITORS HERE SLOW DOWN THE SIGNAL A LITTLE BIT BECAUSE IT TAKES A LITTLE WHILE FOR THE 0 TO BECOME A 1, AND FOR THE 1 TO GO BACK DOWN TO A 0.

AND THAT SLOWS DOWN HOW FAST THIS INVERTER IS GOING TO MEET ITS THRESHOLD AND DO ITS FLIP.

THE COURT: ARE YOU SAYING, MR. WALKER, THAT AS A RESULT OF THIS CONTROL CIRCUIT, IN TALBOT, THERE IS NO VARIATION OR VARIABILITY BASED ON TEMPERATURE, VOLTAGE, ET CETERA?

MR. WALKER: NO. THERE IS, THERE IS VARIABILITY. BUT IT DEPENDS ON HOW HARD YOU LOOK.

THE COURT: WHY DON'T YOU EXPLAIN THAT TO ME.

MR. WALKER: THE INTENTION OF TALBOT IS THEY GOT TO CONTROL VOLTAGE. THIS IS PART OF A PHASE LOCKED LOOP. TALBOT IS DISCLOSING A PHASE LOCKED LOOP. THIS IS THE VCO OF A PHASE LOCKED LOOP. AND SO WHAT THEY'RE TRYING TO DO HERE IS CONTROL.

NOW, IT'S NOT PERFECT. AND THAT'S WHY DR. OKLOBDZIJA TESTIFIED AS HE DID. IF YOU LOOK AT MOORE, I MEAN THEY MAY STAND UP WITH MORE FULL ANSWERS FROM HIM, TRYING TO EXPLAIN WELL, YOU KNOW, IT'S DOMINATED BY OTHER THINGS, IT'S A SMALL DIFFERENCE, YOU KNOW, FIGHTING ME ON THIS. BUT IN THE END, THEY KNOW THAT THEIR INFRINGEMENT THEORY IS GOING TO TURN ON VARIABILITY OF PHASE-LOCKED LOOPS. SO THEY HAVE TO TAKE THAT POSITION.

AND THE SECOND POINT HERE, I TOUCHED ON THIS IN THE TUTORIAL, COMPARED TO A FREE RUNNING OSCILLATOR, CONTROLLED SLOWS THINGS DOWN. AND THAT'S WHAT THIS CAPACITOR DOES. IT SLOWS THINGS DOWN.

SO WHATEVER VARIABILITY WE'RE TALKING ABOUT WITH A RING OSCILLATOR HAS TO BE DIFFERENT FROM THE INHERENT VARIABILITY OF PRIOR ART.

THE INVENTORS MOORE AND FISH DID NOT INVENT THE IMPERFECTION OF TALBOT'S VOLTAGE CONTROLLED OSCILLATORS. THEY DIDN'T INVENT THE IMPERFECTION OF CLOCKS GENERALLY. WHATEVER IT IS THAT MAKES THE INVENTION VARIABLE HAS GOT TO BE SOMETHING OTHER THAN, OR SHOULD BE SOMETHING OTHER THAN THE IMPERFECTION. AND THE CHALLENGE BECOMES WELL, HOW DO WE EXPRESS THAT?

AND IN THEIR REPLY BRIEF -- WELL, LET ME FIRST ANSWER HOW WE DO THAT. WHICH IS WE TAKE WHAT THEY SAID TO THE EXAMINER, AND THEY NEVER DENIED SAYING TO THE EXAMINER, THAT IT'S NON-CONTROLLABLE AND CAN BE, AND VARIES WITH THE ENVIRONMENT BECAUSE OF THE LACK OF CONTROL

THE COURT: I UNDERSTAND, I THINK, NOW PRETTY CLEARLY THE SUMMARY THAT THE EXAMINER PROVIDED. WHY START THERE, WHY PUT SO MUCH WEIGHT THERE?

I'M LOOKING AT COLUMN 16, LINE 59. DOESN'T IT TEACH US ALL EXPLICITLY THAT THE RING OSCILLATOR FREQUENCY IS DETERMINED BY, AND THEN THERE ARE THREE VARIABLES IDENTIFIED; WOULDN'T THAT SOLVE YOUR PROBLEM? JUST A THOUGHT.

MR. WALKER: THE PROBLEM IS, THAT -- THE PROBLEM IS, THAT WE SEE WITH THIS, IS THAT THEY GOT TALBOT PAST THE EXAMINERS ON A RE-EXAM BY DISTINGUISHING IT ON SOME BASIS. AND AS I JUST SHOWED, DR. OKLOBDZIJA ADMITTED THAT TALBOT VARIES IN THE WAY THAT'S DESCRIBED HERE IN THE PATENT.

THE COURT: RIGHT. SO I THINK THAT THE POSITION THEY TAKE IN THE RE-EXAM IS SUPPORTIVE, DR. OKLOBDZIJA'S STATEMENTS MAY ALSO FURTHER SUPPORT YOUR POSITION. BUT AT THE END OF THE DAY, IS THERE SOMETHING MORE IN THE -- WHAT I'M TRYING TO GET AT HERE IS, ARE YOU POINTING ME TO SOMETHING IN THE RE-EXAM SUMMARY OR IN DR. OKLOBDZIJA'S TESTIMONY WHICH GOES ABOVE AND BEYOND WHICH, THAT WHICH IS STATED HERE IN COLUMN 16?

MR. WALKER: WELL, THEY HAD TO TAKE THE POSITION,

THERE'S AN ASPECT OF THIS CLAIM AND OF THIS INVENTION THAT'S A LITTLE STRANGE IN, I GUESS IN PATENT LAW, I'LL SAY.

THE COURT: YEAH.

MR. WALKER: IN PATENT LAW, WE HAVE THIS NOTION THAT YOU HAVE THE CLAIM, AND THEN IF YOU HAVE AN ACCUSED THING, IF IT MEETS THE ELEMENTS -- EXTRA ELEMENTS DON'T COUNT.

THE COURT: RIGHT.

MR. WALKER: HERE, THE IDEA IS NO EXTRA ELEMENTS. THAT'S REALLY THE INVENTION. THAT'S REALLY WHAT WE'RE SAYING HERE, IS THAT PLL'S ARE OLD. PULSE CONTROLLED OSCILLATORS ARE OLD. PUTTING CONTROLS ON THESE THINGS ARE OLD.

AND HERE THEY ARE SAYING THAT THEIR INVENTIONS IS NO CONTROL. AND THAT SHOWS UP WITH TALBOT, THEY'RE FORCED TO GO THERE WITH TALBOT BECAUSE THAT'S AN ON-CHIP CPU CLOCK. IT'S AN OSCILLATOR. AND THEY HAVE TO TELL THE EXAMINER LOOK, WE DON'T HAVE CONTROLS, OKAY. WE DON'T HAVE CONTROLS. AND THAT'S WHY IT'S A BIG DEAL TO US.

I MEAN, COMING RIGHT DOWN TO IT, THAT'S WHY IT'S A BIG DEAL. BECAUSE THEY'RE GOING TO SAY OH, YOU KNOW, WE GOT THIS PAST THE EXAMINER. WE GOT TALBOT PAST THE EXAMINER. YOU DON'T HAVE TO LOOK AT TALBOT FOR INVALIDITY. WE GOT PATENTS HERE. WE GOT TALBOT PAST THE EXAMINER.

THEY GOT IT PAST THE EXAMINER BY SAYING NO CONTROL. THAT'S HOW THEY DID IT. AND IF THAT'S HOW THEY DID IT, THAT NEEDS TO BE IN THE CLAIM CONSTRUCTION. SO THAT WE CAN ADDRESS

THAT PROPERLY DOWN THE ROAD.

THAT'S, THAT'S THE IMPORTANCE OF THIS.

THE COURT: ALL RIGHT.

MR. WALKER: SO THEY RETREAT IN THEIR REPLY BRIEF.

AND I JUST WANT TO MAKE A POINT THAT THERE'S, YOU KNOW, WE ARE RELYING ON WHAT'S IN THE RECORD AS TO HOW THEY DISTINGUISHED TALBOT. THAT'S WHERE OUR CONSTRUCTION COMES FROM.

THEY'VE GOT OTHER DISTINCTIONS THEY WANT TO MAKE. THEY WANT TO SAY, OH, IT DOESN'T COVER SCHMITT TRIGGERS. IT DOESN'T COVER THIS. IT DOESN'T COVER THAT. WE HAVE PATENTS THAT SAY THAT IT'S NOT REALLY A RING OSCILLATOR.

WELL, THAT'S NOT WHAT THEY SAID TO THE EXAMINER. AND THAT'S WHAT THE PUBLIC IS LOOKING AT, IS WHAT THEY SAID TO THE EXAMINER.

AND ONCE THEY SAY SOMETHING TO THE EXAMINER, THEY CAN'T TAKE IT BACK UNLESS THEY ARE EXPLICIT TO THE EXAMINER LATER. AND THEY HAD THAT OPPORTUNITY. AND THEY DIDN'T TAKE IT BACK.

I'LL TURN IT BACK OVER TO MS. KEEFE.

THE COURT: MS. KEEFE?

MS. KEEFE: THANK YOU. I PROMISE IT'S NOT MUCH, YOUR HONOR.

YOUR HONOR ASKED, VERY SPECIFICALLY, AND I LOVE THE FACT THAT YOU'RE SAYING HEY, COLUMN 16 LOOKS LIKE IT'S

EXPLAINING THIS PRETTY CLEARLY. I AGREE. BUT IT DIDN'T QUITE EXPLAIN IT CLEARLY ENOUGH BASED ON HOW THE PATENTEE IS TRYING TO ASSERT ITS PATENT IN THIS CASE.

WHAT WE HAVE TO DO, WHERE COLUMN 16 DOESN'T GO QUITE FAR ENOUGH IS WE HAVE TO GET RID OF "EXTERNAL CONTROL SIGNALS, LIKE A VCO." SO NOT JUST THAT IT RUNS WITH TEMPERATURE, FREQUENCY AND, YOU KNOW, ENVIRONMENTAL CONDITIONS, BUT WE HAVE TO EXCLUDE EXTERNAL SIGNALS FROM COMING IN, THESE OTHER CONTROLS.

WHY DO WE KNOW THAT THAT'S GOING TO BE AN ISSUE IN THIS CASE? BECAUSE THEIR INFRINGEMENT CONTENTIONS TELL US THAT.

THEY'RE SAYING THAT THE RING OSCILLATOR IN OUR PRODUCT IS A VCO, OR A CURRENT CONTROLLED OSCILLATOR. SO THEY'RE TRYING TO READ THEIR RING OSCILLATOR ON CURRENT CONTROLLED OR VOLTAGE-CONTROLLED OSCILLATORS. BUT THAT'S EXACTLY WHAT THEY SAID THEY WEREN'T. WE'RE NOT THE VCO OF TALBOT; WE ARE NON-CONTROLLED, VARIABLE DEPENDING ON TEMPERATURE.

SO WE HAVE TO MAKE SURE THAT IT'S CLEAR IN THE DEFINITION THAT THEY DON'T GET TO GO BACK AND TRY TO CLAIM THE VERY THING THAT THEY DISCLAIMED IN ORDER TO GET THEIR PATENT ALLOWED IN THE FIRST PLACE.

THIS IS INCREDIBLY CONSISTENT WITH WHAT COLUMN 16 SAYS. BECAUSE COLUMN 16 SAYS, I'M NOT THE OLD CLOCKS THAT HAD

A DESIRED THING THAT THEY WANTED TO HOLD THEMSELVES TO. INSTEAD I WANT TO BE FREE RUNNING; I WANT TO HANG OUT WITH WHAT'S GOING ON IN THE ENVIRONMENT. I DON'T WANT OTHER SIGNALS COMING IN AND MESSING WITH ME. I DON'T WANT SOMEBODY ELSE TELLING ME WHAT TO DO.

SAME THING IS TRUE FOR THE '148. THEY, AGAIN, FOR THE RING OSCILLATOR, ACCUSE PLL, AND SAY THAT THE PRESENCE OF PLL SAYS THERE'S A VCO OR A CURRENT CONTROL, OR VOLTAGE-CONTROLLED OR CURRENT CONTROLLED OSCILLATOR.

THE DEFINITION SIMPLY CAN'T BE THAT BROAD BECAUSE THEN WE WOULD BE RE-ENCOMPASSING THAT WHICH WAS DISCLAIMED IN ORDER TO GET THIS PATENT TO ISSUE.

SO, AT THE END OF THE DAY, THE SPECIFICATION IN THE FILE HISTORY CONFIRMED THAT THE CLAIMED RING OSCILLATOR IS NON-CONTROLLABLE. IF YOUR HONOR PREFERS TO USE SOMETHING LIKE "DOES NOT RECEIVE SIGNALS FROM AN EXTERNAL SOURCE, OR IT DOES NOT HAVE SOMEONE TAMPING IT DOWN, OR TELLING IT WHAT TO DO; FREE RUNNING" THERE ARE LOTS OF DIFFERENT WAYS WE CAN GET AT THE SAME THING.

BUT WE HAVE TO MAKE SURE TO EXCLUDE THE NOTION OF THESE CONTROLS COMING IN TO HOLD SOMETHING TO A DESIRED FREQUENCY, A DESIRED VOLTAGE, A DESIRED TEMPERATURE; SOMETHING ALONG THOSE LINES.

THE CLAIMED RING OSCILLATOR CAN'T RELY ON A CONTROL SIGNAL. IT HAS TO BE ALLOWED TO BE FREE RUNNING. AND, IN

FACT, I GUESS THE ONLY OTHER POINT I'D MAKE IS I WAS THINKING ABOUT IT LAST NIGHT, I WAS THINKING ABOUT HOW WE WERE ASKED, THE REASON JUDGE WARE SAID GO TELL ME WHAT THAT TALBOT DOES, IF I DON'T GIVE A DISCLAIMER, IF I DON'T SAY "BUT NOT CONTROL SIGNALS" AM I READING ON THE STUFF THAT YOU DISCLAIMED? AND THE ANSWER IS YES.

IF WE GO BACK TO, YOU KNOW, LOOKING AT WHAT IS IN TALBOT, THERE ARE THREE INVERTERS IN A LOOP. AND I THINK AS WE'VE ALL DISCUSSED, THE ONLY THING THAT IS IN MOST OF THE PAPERS IS IT SEEMS LIKE PLAINTIFF IS TRYING TO SAY THAT USING THE SCHMITT TRIGGER IS ENOUGH TO TAKE IT OUT OF BEING AN INVERTER. BUT THAT'S SIMPLY NOT TRUE.

ALL OF WHAT DR. OKLOBDZIJA IS TALKING ABOUT IS A HYPOTHETICAL SITUATION IN WHICH YOU'RE ONLY USING A SCHMITT TRIGGER. HE ADMITS THAT HE WASN'T ANALYZING FIGURE 3. HE WAS TALKING ABOUT WELL, THERE'S A WAY YOU CAN USE A SCHMITT TRIGGER BY ITSELF. IT DOESN'T HAVE TO BE IN A LOOP.

THE COURT: WHICH YOU DON'T DISAGREE WITH. OF COURSE, YOU CAN ALWAYS USE A SCHMITT TRIGGER BY ITSELF.

MS. KEEFE: RIGHT. EXACTLY. BUT THAT'S NOT WHAT TALBOT HAD. TALBOT HAD IT IN A LOOP. AND IT WAS CONTROLLED COMING IN. AND IT WENT THROUGH THREE INVERTERS. THAT WOULD INFRINGE IF ALL YOU DID WAS TAKE THE DEFINITION OF RING OSCILLATOR THAT WE'VE AGREED TO, WITHOUT THE ADDITIONAL LANGUAGE.

AND, AGAIN, IF YOUR HONOR HAS A DIFFERENT WAY, INSTEAD OF NON-CONTROLLABLE, WE'RE FINE WITH THAT. BUT IT HAS TO EXCLUDE RECEIVING SIGNALS FROM THE OUTSIDE TO TELL YOU WHAT TO DO.

THE COURT: CAN YOU JUST GO BACK BEFORE I, BEFORE WE MOVE ON. GO BACK TO THE DISCUSSION OF THE OTHER PRIOR ART REFERENCES, MAGAR AND SO FORTH.

MS. KEEFE: ABSOLUTELY.

THE COURT: AND I THOUGHT I REMEMBER THIS FROM YOUR SLIDE. THIS WAS IN THE ORIGINAL PROSECUTION?

MS. KEEFE: CORRECT.

SO, AGAIN, AS YOUR HONOR POINTED OUT, WHY DON'T I JUST GO BACK TO THE ORIGINAL SPECIFICATION. THAT'S EXACTLY WHERE YOU'RE SUPPOSED TO START. AND THEN YOU ALSO LOOK AT THE ORIGINAL PROSECUTION HISTORY.

THIS IS AN ABSOLUTELY CONSISTENT POSITION THEY'VE TAKEN ALL ALONG. IS THAT WE ARE NOT FREQUENCY CONTROLLED.

AND I REGRET THAT THE PART I DIDN'T QUOTE UP THERE, BUT I READ TO YOUR HONOR, IS JUST A LITTLE BIT FURTHER DOWN ON THAT PAGE IT SAID, EVEN IF YOU PUT THESE CLOCKS ON THE SAME CHIP IT WOULD STILL HAVE THE PROBLEM BECAUSE CRYSTALS CONTROL THINGS. CRYSTALS HAVE AN EXTERNAL WAY OF KEEPING THINGS FIXED. AT A FREQUENCY. AND THAT IS NOT US. BECAUSE MAGAR DOES NOT CONTEMPLATE A VARIABLE SPEED CLOCK AS CLAIMED. THE ONE THAT DOESN'T RESPOND TO EXTERNALITIES, LIKE CRYSTALS WHICH CONTROL

THINGS OR SIGNALS WHICH COME IN AND CONTROL.

AND THE SAME, WE TALKED ABOUT IT A LITTLE BIT HERE. I THINK YOUR HONOR POINTED OUT SOMETHING INCREDIBLY USEFUL. AND I KEPT SITTING HERE THINKING ABOUT IT. A LOT OF IT IS ALL ABOUT THIS DESIRED THING, RIGHT? WHEN YOU HAD THE PRIOR ART, EVERYBODY WANTED IT TO BE SOMETHING THAT IT WASN'T, IF IT WAS LEFT ALONE. IT HAD TO BE CONTROLLED. THERE WAS A DESIRED FREQUENCY BEFORE YOU GOT STARTED, A DESIRED TEMPERATURE. YOU HAD TO TAMP IT DOWN A LITTLE BIT.

AND THE DIFFERENCE WITH THIS PATENT WAS HE SAID I DON'T WANT TO TAMP ANYTHING DOWN. I WANT TO LET IT RUN. THEN IF THERE'S SOME VARIABILITY, THAT'S FINE. BUT I WANT TO LET IT RUN AS FAST AS IT CAN. THAT'S THE DISTINCTION.

THE COURT: GOT IT. THANK YOU VERY MUCH.

MS. KEEFE: THANK YOU.

THE COURT: ANY REBUTTAL? MR. OTTESON.

MR. OTTESON: YES, YOUR HONOR, BRIEFLY.

I DIDN'T KNOW WE WERE GOING TO BE TALKING TODAY ABOUT INFRINGEMENT AND VALIDITY. THIS IS A CLAIM CONSTRUCTION HEARING. AND THEY'RE CHARACTERIZING WHAT WE SAID IN THE FILE HISTORY AS A DISCLAIMER. AND IT'S JUST NOT TRUE.

SO IF YOU LOOK AT WHAT WE SAID IN RESPONSE TO THE, THAT INTERVIEW SUMMARY AND OFFICE ACTION, WHAT WE SAID WAS WE ACKNOWLEDGE THAT TALBOT HAD A VCO. WE DIDN'T SAY THAT VOLTAGE CONTROLLED IS NOT SOMETHING THAT YOU COULD ADD; ABSOLUTELY

DIDN'T SAY THAT.

WE JUST SAID THAT TALBOT, FIGURE 3 DOESN'T DISCLOSE A RING OSCILLATOR. AND IT DOESN'T. AS ANYONE OF ORDINARY SKILL IN THE ART WOULD UNDERSTAND, IT DOES NOT DISCLOSE A RING OSCILLATOR.

NOW, THEY'VE, WE'VE MORPHED THIS WAY BEYOND WHERE WE SHOULD BE FOR CLAIM CONSTRUCTION. BUT THE FACT OF THE MATTER IS YOU HAVE TO GO BACK TO 1989, WHEN THIS INVENTION REVOLUTIONIZED MICROPROCESSOR ARCHITECTURE.

SHEETS, MAGAR, THOSE WERE BOTH REFERENCES JUST LIKE, JUST ABOUT EVERYBODY DID IT, WHERE YOU HAD AN OFF-CHIP CLOCK THAT WAS CLOCKING YOUR CPU. AND YOU COULDN'T TAKE ADVANTAGE OF HAVING BOTH OF THOSE ON THE SAME CHIP.

NOW, TALBOT DID HAVE A, THIS RELAXATION OSCILLATOR, WHICH IS VERY DIFFERENT FROM A RING OSCILLATOR ON THE SAME CHIP. BUT IT DIDN'T HAVE A SECOND CLOCK TO CLOCK THE I/O FUNCTIONALITY. AND, AGAIN, I DIDN'T KNOW WE WERE GOING TO BE TALKING ABOUT -- I MEAN, THEY'RE TRYING TO MAKE OUT THEIR INVALIDITY CASE AND THEIR NON-INFRINGEMENT CASE NOW.

BUT THE FACT OF THE MATTER IS WE DISTINGUISHED TALBOT BY POINTING OUT TO THE EXAMINER, HEY, THIS IS NOT A RING OSCILLATOR. AND THE GENIUS OF THIS INVENTION WAS YEAH, TO PUT A CLOCK, A RING OSCILLATOR CLOCK ONTO THE SAME PIECE OF SILICON AS THE CPU. AND AS YOU POINTED OUT, IN COLUMN 16, THE RING OSCILLATOR FREQUENCY IS DETERMINED BY THE PARAMETERS OF

TEMPERATURE, VOLTAGE AND PROCESS.

WELL, THE PLAINTIFFS, AND MANY OTHER PEOPLE HAVE TAKEN ADVANTAGE OF THIS REVOLUTIONARY ARCHITECTURAL CHANGE IN HOW MICROPROCESSORS WERE MADE FOR MANY, MANY YEARS NOW. THEY ARE TAKING FULL ADVANTAGE OF THIS BY PUTTING A RING OSCILLATOR CLOCK ON THE SAME PIECE OF SILICON AS THE CPU. AND THAT ALLOWS THEM, IN CONTRAST TO THE PRIOR ART, WHERE YOU HAD TO PLAN FOR THE WORST CASE SCENARIO, IT ALLOWS YOU TO RUN MUCH FASTER. IT ALLOWS A CLOCK THAT WILL KEEP UP WITH THE CIRCUITRY OF THE CPU.

AND IN TERMS OF CONTROL, AT THE UPPER END, THERE'S NOTHING IN THE PATENT THAT SAYS YOU CAN'T DO THAT, CONTROL IT WITHIN A RANGE, WITH A VCO. AND THAT WASN'T DISCLAIMED. WHEN WE TALKED TO THE EXAMINER ABOUT TALBOT, WE DIDN'T SAY, OH WELL, YOU KNOW, TALBOT IS ALL ABOUT CONTROL AND WE'RE NOT. WE SAID THAT'S NOT A RING OSCILLATOR.

BUT, YOU KNOW --

THE COURT: CAN I ASK YOU ABOUT THE EXAMINER FOR A MOMENT?

MR. OTTESON: YEAH.

THE COURT: SO IF I WERE TO ADOPT YOUR POSITION, WOULD I NECESSARILY HAVE TO CONCLUDE THAT THE EXAMINER JUST GOT IT WRONG? THAT HE -- I THINK IT'S A HE -- MISCHARACTERIZED THE PRESENTATIONS MADE, OR THE POSITION THAT WAS BEING TAKEN BY THE APPLICANT?

MR. OTTESON: I THINK, I'M NOT SAYING -- I DON'T

THINK THERE WAS NECESSARILY MISCHARACTERIZATION. I THINK THERE WAS A MISAPPREHENSION ABOUT WHAT THE INVENTION WAS.

REALLY, THE INVENTION WAS TO HAVE THE CLOCK AND THE CPU ON THE SAME PIECE OF SILICON SO YOU CAN TAKE ADVANTAGE OF THAT SPEED. AND ALSO AS, YOU KNOW, PROCESS SIZES HAVE SHRUNK THEY CAN GO FASTER AND FASTER; AND SO CAN THE CLOCK TO KEEP UP WITH THAT.

THE COURT: OKAY. LET ME ASK ANOTHER RELATED QUESTION.

GOING BACK TO TALBOT FOR A MOMENT, ARE YOU SAYING THAT THE OSCILLATOR IN TALBOT, AT THE END OF THE DAY, REALLY ONLY REQUIRES ONE INVERTER OR ONE TRIGGER?

MR. OTTESON: WELL, I THINK IT'S INTERESTING THAT TALBOT ITSELF DOESN'T REFER TO THAT AS A RING OSCILLATOR. TALBOT ITSELF DOESN'T REFER TO THE SCHMITT TRIGGER AS AN INVERTER. AND REALLY THE WAY IT WORKS IS FUNDAMENTALLY DIFFERENT, AND EVERYBODY KNOWS THAT.

I MEAN, MAYBE THE PROPOSED CONSTRUCTION FROM JUDGE WARE ISN'T QUITE FINE ENOUGH; WITH RESPECT TO BASICALLY SAYING RING OSCILLATOR, ODD NUMBER OF INVERTERS ARRANGED IN A LOOP, BUT NOT TALBOT. THAT'S FINE.

I MEAN -- THAT WOULD BE BASICALLY OUR PROPOSED ALTERNATIVE CONSTRUCTION. TO BASICALLY ADD AT THE END, "BUT WHERE THREE OR MORE INVERSIONS ARE REQUIRED TO MAINTAIN OSCILLATING OUTPUT." WE ALL KNOW THAT THAT'S NOT TALBOT. THIS

IS A YOU KNOW IT WHEN YOU SEE IT TYPE OF A THING.

I KNOW A RING OSCILLATOR WHEN I SEE IT. AND, TALBOT, YOU AIN'T A RING OSCILLATOR. AND EVERYBODY KNOWS IT, INCLUDING THEM.

AND THAT WASN'T THE BASIS OF ANY KIND OF DISCLAIMER ABOUT CONTROLLABILITY AT ALL. IN FACT, IF YOU LOOK AT WHAT YOU WERE POINTING TO, YOUR HONOR, IN COLUMN 16, 59; THE RING OSCILLATOR FREQUENCY IS DETERMINED --

THE COURT: BY THE PARAMETERS.

MR. OTTESON: -- BY THE PARAMETERS OF TEMPERATURE, VOLTAGE AND PROCESS.

THE COURT: NO DISCUSSION OF CONTROL.

MR. OTTESON: NO DISCUSSION OF CONTROL.

AND, AGAIN, PUTTING THOSE ON -- AGAIN, WE'RE TALKING ABOUT 23, 24 YEARS AGO, WHEN THEY CAME UP WITH THIS INVENTION.

WHICH, BY THE WAY, MY CLIENT, DAN LECKRONE, FUNDED THE DEVELOPMENT OF THE SHBOOM MICROPROCESSOR. NOTE, THIS WAS REVOLUTIONARY.

NOW, THEY'RE ALL DOING IT. AND EVERYBODY DOES IT, AND TAKES THIS FOR GRANTED.

BUT CONTROL AT THE UPPER ENDS, WHEN YOU'RE TAKING ADVANTAGE OF ALL THAT SPEED BY HAVING THEM ON THE SAME PIECE OF SILICON, IT DOESN'T SAYING ANYTHING ABOUT OH, YOU CAN'T POSSIBLY HAVE ANY CONTROL. NO. THEY'RE TAKING FULL ADVANTAGE

OF THE INVENTION BY PUTTING THEM ON THE SAME PIECE OF SILICON. AND THEN CONTROLLING THEM WITHIN A RANGE, WHICH EVEN THEY AGREE THERE IS SOME VARIATION EVEN IF YOU USE A PLL, OR A VOLTAGE CONTROLLED CIRCUIT.

THE COURT: RIGHT. OKAY. ANY FURTHER POINTS ON THIS TERM?

MR. OTTESON: YEAH. I GUESS THE LAST POINT I WOULD MAKE IS THAT THE LAW IS CRYSTAL CLEAR THAT ANY KIND OF A DISCLAIMER OR DISAVOWAL HAS TO BE CLEAR AND UNAMBIGUOUS. AND WE JUST DON'T HAVE THAT HERE.

WHAT WE HAVE IS, YOU KNOW, US SAYING TO THE EXAMINER, HEY, TALBOT IS NOT A RING OSCILLATOR. AND, OH BY THE WAY, SINCE WE'RE TALKING ABOUT WHATEVER VALIDITY ARGUMENTS THEY WANT TO RUN, I MEAN, IT DOESN'T EVEN HAVE A SECOND CLOCK.

SO THE DISAVOWAL HAS TO BE CLEAR AND UNAMBIGUOUS.

THE COURT: ALL RIGHT. THANK YOU.

MR. OTTESON: THANK YOU, YOUR HONOR.

MS. KEEFE: I ONLY JUST WANTED TO CORRECT TWO THINGS, YOUR HONOR.

THE COURT: GO AHEAD.

MS. KEEFE: TALBOT, THERE IS A SECOND CLOCK, AND IT'S ON THE SAME CHIP. THEY DIDN'T INVENT PUTTING THE CLOCK ON THE CHIP.

MAGAR ITSELF TALKED ABOUT, I READ IT TO YOU, WELL EVEN IF WE PUT BOTH OF THEM ON THE SAME CHIP, IT'S NOT THE

SAME. SO THIS IS NOT A NOTION OF THE ONLY REASON WE'RE DIFFERENT FROM EVERYBODY ELSE IS BECAUSE, YOU KNOW, THEIRS IS OFF OR ON, AND THAT'S THE BIG DIFFERENCE. IT'S THE CONTROLLABILITY.

TALBOT HAD TWO OSCILLATORS. ONE WAS FREQUENCY CONTROLLED, AND ONE WAS VOLTAGE CONTROLLED. AND THEY'RE RIGHT, NOBODY CALLED THEM RING OSCILLATORS. WHY? BECAUSE THEY WERE CONTROLLED.

SO I JUST WANTED TO MAKE SURE THOSE WERE CLEANED UP FOR THE RECORD.

MR. WALKER: I'M NOT QUITE SURE THAT WAS QUITE WHAT TALBOT SAYS. BUT TALBOT IS A PHASE-LOCKED LOOP WITH AN EXTERNAL CRYSTAL CLOCK.

MS. KEEFE: YEAH.

MR. WALKER: IT HAS AN EXTERNAL CRYSTAL CLOCK. THAT'S THE SECOND CLOCK. AND IT HAS AN ON-CHIP, ON-CHIP FIGURE THREE IS WHAT IT HAS. OKAY.

THE COURT: ALL RIGHT. THANK YOU.

IT'S 12:15. I SUGGEST WE BREAK FOR LUNCH. WE MADE IT THROUGH EXACTLY ONE TERM.

MS. KEEFE: IT'S THE WORST ONE, YOUR HONOR. I PROMISE.

THE COURT: OR THE BEST, DEPENDING ON HOW YOU LOOK AT IT.

IF I COULD ASK, IF WE COULD BE BACK HERE BY 1:00.

I'D LIKE TO JUST GET BACK AT IT.

(WHEREUPON, THE CLERK CONFERS WITH THE COURT.)

THE COURT: MR. RIVERA INFORMS ME THAT WE HAVE SOME ACTIVITY ON MY CRIMINAL DOCKET THAT NEEDS TO BE ADDRESSED SO, WHY DON'T YOU TAKE UNTIL 1:30.

UNFORTUNATELY, I HAVE SOME ARRESTS I NEED TO DEAL WITH. SO WE'LL BE BACK AT 1:30. ALL RIGHT. SEE YOU AT 1:30.

(WHEREUPON, BREAK FOR THE NOON HOUR WAS HAD.)

A-F-T-E-R-N-O-O-N S-E-S-S-I-O-N

(WHEREUPON, COURT CONVENED AND THE FOLLOWING PROCEEDINGS WERE HAD:)

THE COURT: ALL RIGHT. I BELIEVE BEFORE WE BROKE FOR LUNCH WE GOT THROUGH THE FIRST TERM.

MR. WALKER, MS. KEEFE, DO YOU WANT TO PICK THE NEXT ONE?

MS. KEEFE: NO, I THINK IT'S --

THE COURT: OH, I'M SORRY, I THOUGHT -- WAS IT YOUR TURN, MR. OTTESON?

MR. OTTESON: WELL, I WAS GOING TO SUGGEST THAT WE GO TO "INSTRUCTION REGISTER" NEXT BECAUSE THAT WAS THE OTHER TERM JUDGE WARE WANTED SOME ADDITIONAL BRIEFING ON.

THE COURT: DOES THAT WORK FOR YOU ALL?

MS. KEEFE: ABSOLUTELY, YOUR HONOR.

THE COURT: OKAY. LET'S GO THERE.

MR. OTTESON: ALL RIGHT. ON "INSTRUCTION

REGISTER", YOUR HONOR, JUDGE WARE CAME UP WITH A CONSTRUCTION. IT WAS A LITTLE BIT VAGUE BECAUSE I THINK HE WAS FOCUSED MORE ON A SOFTWARE DICTIONARY AS OPPOSED TO, YOU KNOW, WHAT THIS SPECIFIC INSTRUCTION REGISTER IS ABOUT. BUT HE WAS ABSOLUTELY RIGHT WHEN HE SAID THAT INSTRUCTION REGISTER HAS A "PLAIN AND ORDINARY MEANING."

AND WE REALLY FEEL LIKE THIS IS WHAT HE WAS TALKING ABOUT. "A REGISTER TO HOLD THE NEXT INSTRUCTION OR INSTRUCTIONS TO BE EXECUTED." AND YOU SAW IN FIGURE 4 OF THE PATENT, WHEN WE WERE TALKING ABOUT THAT ANIMATION WITH THE INSTRUCTION BYTES THAT WERE GOING UP THE BUS, THAT THAT'S EXACTLY WHAT THAT IS. AND SO, WE WOULD SUBMIT THAT THAT WAS THE INTENT OF HIS INSTRUCTION. IT IS THE PLAIN AND ORDINARY MEANING. AND REALLY NO FURTHER CONSTRUCTION IS NECESSARY.

NOW, THE PLAINTIFFS, I THINK, TO A CERTAIN EXTENT, DO AGREE WITH THAT APPROACH. I MEAN, THERE ARE SOME SIMILARITIES HERE. "REGISTER THAT RECEIVES AND HOLDS ONE OR MORE INSTRUCTIONS FOR SUPPLYING TO CIRCUITS THAT INTERPRET THEM." SO, I THINK THOSE ARE GENERALLY THE SAME.

BUT, AGAIN, HERE WE HAVE A SITUATION WHERE THEY WOULD LIKE TO ADD WHAT WE BELIEVE IS AN EXTRANEOUS LIMITATION. AND WE BRIEFED THIS, WE'VE PROVIDED SUBSTANTIAL BRIEFING ON IT.

SO, IF WE GO TO CLAIM 1, OF THE '749, AND THIS CAME OUT OF THE RE-EXAMINATION, WE SEE THAT HERE'S THIS TERM, "INSTRUCTION REGISTER" AND IT'S CONFIGURED TO STORE MULTIPLE

SEQUENTIAL INSTRUCTIONS. VERY SIMILAR TO WHAT WE SAW IN THE ANIMATION. AND, ACTUALLY, WHAT FIGURE 4 ACTUALLY SHOWS IS THAT THERE ARE, YOU KNOW, IT'S A 32-BIT WIDE REGISTER, IN THAT EXAMPLE, THAT CAN HOLD FOUR 8-BIT INSTRUCTIONS.

NOW, WHAT THEY ARE TRYING TO DO HERE, AND THIS HAS ALSO BEEN BRIEFED, BUT THEY WOULD LIKE TO TAKE SOME LANGUAGE THAT JUDGE WARD USED TO CONSTRUE THE TERM "INSTRUCTION GROUPS" IN CLAIM 29 OF THE '584 PATENT. AND THAT'S JUST NOT WHAT WE'RE TALKING ABOUT HERE.

YOU SEE, THIS IS FROM JUDGE WARD'S CLAIM CONSTRUCTION, BACK IN 2007, WHERE HE SAYS, "THE COURT CONSTRUES INSTRUCTION GROUPS TO MEAN SETS OF FROM 1 TO A MAXIMUM NUMBER OF SEQUENTIAL INSTRUCTIONS, EACH SET BEING PROVIDED TO THE INSTRUCTION REGISTER AS A UNIT AND HAVING A BOUNDARY, AND IN WHICH ANY OPERAND THAT IS PRESENT MUST BE RIGHT-JUSTIFIED."

BUT WE'RE, AGAIN, TALKING ABOUT THE DIFFERENCE BETWEEN THE EGG CARTON AND THE EGGS. THE EGGS BEING THE SOFTWARE, THE BITS, THE INSTRUCTIONS; AND THE EGG CARTON BEING THE HARDWARE.

WE'RE TALKING ABOUT, WITH INSTRUCTION REGISTER, CONSTRUING THE HARDWARE.

THE COURT: CAN YOU JUST GO BACK TO THE SLIDE FOR A MOMENT. SO I JUST WANT TO DIGEST WHAT YOU PRESENTED.

SO JUDGE WARD, IN THE 2007 CONSTRUCTION, SAID THAT THE INSTRUCTION GROUPS MUST BE RIGHT-JUSTIFIED. OR MORE

IMPORTANTLY THE SEQUENTIAL INSTRUCTIONS WHICH, INCLUDED IN THOSE GROUPS MUST BE RIGHT-JUSTIFIED; IS THAT CORRECT?

MR. OTTESON: IT'S A LITTLE BIT -- THAT'S NOT QUITE RIGHT.

THE COURT: CORRECT AWAY. TELL ME WHERE I HAVE IT WRONG.

MR. OTTESON: HE SAID THAT IF THERE WAS AN OPERAND THAT IS PRESENT, THAT HAS TO BE RIGHT-JUSTIFIED.

THE COURT: OKAY. SO OBVIOUSLY IF IT WERE ONLY AN OPCODE OR SOMETHING LIKE THAT.

MR. OTTESON: RIGHT. SO I THINK, YOU KNOW, FUNDAMENTALLY HE WAS CONSTRUING A DIFFERENT TERM THAN AN "INSTRUCTION REGISTER."

THE COURT: OKAY.

MR. OTTESON: NOW, THIS MATTERED FOR CLAIM 29 IN THE '584, BECAUSE YOU HAVE INSTRUCTION GROUPS AND DISCUSSIONS OF INSTRUCTIONS --

THE COURT: '584 IS NOT ONE OF THE PATENTS IN THE CASE TODAY, CORRECT?

MR. OTTESON: THAT'S RIGHT. IT'S NOT ONE OF THE PATENTS IN THE CASE TODAY. AND, HERE, YOU KNOW, IT ACTUALLY DIDN'T MATTER FOR HIM TO CONSTRUE INSTRUCTION GROUPS BECAUSE IT'S ALL OVER CLAIM 29.

BUT HERE, HERE IS CLAIM 1 OF THE '749, WHICH CAME OUT OF THE RE-EXAMINATION. AND WE SEE DOWN HERE, "AN

INSTRUCTION REGISTER CONFIGURED TO STORE THE MULTIPLE SEQUENTIAL INSTRUCTIONS." WE'RE TALKING ABOUT THE CONSTRUCTION OR THE INTERPRETATION OF THE TERM "INSTRUCTION REGISTER." WE'RE NOT TALKING ABOUT CONSTRUING "INSTRUCTION GROUPS."

THE COURT: AND JUST SO I'M CLEAR, "INSTRUCTION GROUPS" IS NOT INCLUDED ANYWHERE IN THIS LANGUAGE?

MR. OTTESON: THAT'S RIGHT. THE TERM "INSTRUCTION GROUPS" APPEARS NO WHERE IN CLAIM 1 OF THE '749.

THE COURT: AND SO FAR AS CLAIM 1 OF THE '749 GOES, THAT WHICH GOES INTO AN INSTRUCTION REGISTER SIMPLY IS THE INSTRUCTION, OR MORE THAN ONE INSTRUCTION?

MR. OTTESON: YES. THAT'S RIGHT.

THE COURT: GOT IT. OKAY.

MR. OTTESON: NOW, I THINK IT'S IMPORTANT TO UNDERSTAND THOUGH, AND WE DID BRIEF THIS, THAT -- WELL, YOU KNOW, THIS IS MY WHOLE POINT, RIGHT. WE'RE TALKING ABOUT CONSTRUING THE INSTRUCTION REGISTER AS OPPOSED TO THE ARRANGEMENT OF BITS OR INSTRUCTIONS IN THE REGISTER.

BUT CLAIM 7, OR THERE IS A DEPENDANT CLAIM IN THE '749 PATENT WHICH DOES TALK ABOUT INSTRUCTIONS AND HOW THOSE ARE ARRANGED. AND SO, WE HAVE ALSO I THINK A REALLY GOOD CLAIM DIFFERENTIATION ARGUMENT WITH RESPECT TO CLAIM 1. THAT SHOULDN'T LIMIT WHAT AN INSTRUCTION REGISTER IS.

AND BESIDES THAT, IF YOU LOOK AT THE SPECIFICATION OF THE '749 PATENT, WE SEE EXAMPLES OF INSTRUCTIONS THAT,

WHERE, THAT DON'T HAVE AN OPERAND THAT NEEDS TO BE RIGHT-JUSTIFIED. SO, THIS IS FROM COLUMN 31 -- THAT SAYS '764, I THINK THAT MIGHT BE A TYPO. I APOLOGIZE FOR THAT

IN ANY EVENT, THERE ARE THESE REFERENCES TO READ-LOCAL-VARIABLE AND WRITE-LOCAL-VARIABLE INSTRUCTIONS WHICH GO INTO THE INSTRUCTION REGISTERS, WHICH ARE SIMPLY 8-BIT INSTRUCTIONS. AND THERE IS NO NEED FOR THEM TO BE RIGHT-JUSTIFIED. YOU CAN HAVE FOUR INSTRUCTIONS IN THE INSTRUCTION REGISTER AS IS SHOWN HERE.

SO, READING SOME KIND OF REQUIREMENT IN THAT HAS TO DO WITH RIGHT JUSTIFICATION OF OPERANDS JUST DOESN'T MAKE ANY SENSE.

THE COURT: CAN YOU GO BACK TO CLAIM 7 FOR A MOMENT. YOUR SLIDE ON CLAIM 7.

MR. OTTESON: I ACTUALLY DON'T HAVE A SLIDE ON CLAIM 7. I APOLOGIZE FOR THAT.

THE COURT: I THOUGHT THAT WAS THE DEPENDANT CLAIM. MAYBE YOU WERE JUST SPEAKING OF IT.

MR. OTTESON: I WAS JUST TALKING ABOUT IT. I APOLOGIZE FOR THAT.

THE COURT: THAT'S FINE.

MR. OTTESON: BUT I DON'T HAVE THAT.

THE COURT: WELL, PERHAPS IF YOU HAVE THE LANGUAGE, OR I COULD JUST READ IT TO YOU, THE LANGUAGE WHICH CAUGHT MY INTENTION.

MR. OTTESON: SURE.

THE COURT: WHICH IS THAT, AS I UNDERSTAND IT, CLAIM 7 ADDS A REQUIREMENT THAT THERE IS ADDITIONAL STRUCTURE TO THE REGISTER THAT PERMITS DECODING OF INSTRUCTIONS THAT EMPLOY VARIABLE WIDTH OPERANDS. I READ THAT AS BEING IN SOME WAYS BROADER OR MORE EXPANSIVE THAN SIMPLY THE PARTICULAR WAY IN WHICH TO PERMIT THAT WHICH IS BEING SUGGESTED BY THE PLAINTIFFS HERE. COULD YOU SPEAK TO THAT ISSUE?

MR. OTTESON: WELL, I --

THE COURT: IN OTHER WORDS, I THINK -- LET ME JUST ADD, PERHAPS, SOME CLARITY TO WHAT IS OTHERWISE A VERY UNCLEAR QUESTION.

I READ CLAIM 7 AS SAYING, AS BASICALLY ADDING SOME ADDITIONAL STRUCTURE THAT ALLOW YOU TO DO SOMETHING WITH VARIABLE WIDTH OPERANDS. HOW YOU GET THERE, WELL, MAYBE THERE ARE THREE, FOUR, TEN DIFFERENT WAYS TO DO IT, BUT THAT IT ACTUALLY IS NOT LIMITED TO THE PARTICULAR WAY IN WHICH THE PLAINTIFFS' CONSTRUCTION WOULD FACILITATE HANDLING VARIABLE WIDTH OPERANDS, THAT IS TO RIGHT-JUSTIFY IT.

SO MAYBE IF WE CAN TAKE A LOOK AT THE LANGUAGE YOU CAN TELL ME HOW YOU BELIEVE THESE THINGS ALL FIT TOGETHER.

MR. OTTESON: YEAH. LET'S SEE IF WE CAN SEE IT -- -- THAT WAS FINE. YEAH. OKAY.

SO, LET'S SEE, FOR DECODING THE MULTIPLE INSTRUCTIONS --

THE COURT: IT'S ABOUT LINE 37, MAYBE. UTILIZING THE VARIABLE WIDTH OPERAND STORED AND MEANS --

MR. OTTESON: YEAH, OKAY. UTILIZING THE VARIABLE WIDTH OPERAND STORED IN SAID INSTRUCTION REGISTER, AND MEANS CONNECTED TO SAID COUNTER.

SO, I'M NOT SURE I UNDERSTAND YOUR POINT, YOUR HONOR. ARE YOU SAYING THAT YOU THINK THAT THIS CREATES A BROADER STRUCTURE THAN WHAT'S DISCUSSED IN CLAIM 1?

THE COURT: WELL, I'M JUST TRYING TO THINK THROUGH HOW THE PUZZLE PIECES FIT TOGETHER.

THE SHORT ANSWER TO YOUR QUESTION I THINK IS YES. SO I READ THE PLAINTIFFS' CONSTRUCTION AS SAYING LOOK, THERE'S GOT TO BE RIGHT JUSTIFICATION OF THE OPERANDS THAT COME WITHIN -- OR THAT FALL INTO THIS REGISTER, THAT ARE BROUGHT INTO THIS REGISTER.

AND WHAT I READ IN DEPENDANT CLAIM 7 IS -- AND OF COURSE THE REASON WHY YOU WANT TO DO THAT, PRESUMABLY, IS BECAUSE YOU HAVE TO HANDLE, YOU NEED SOME WAY OF DEALING WITH VARIABLE WIDTH OPERANDS. I READ DEPENDENT CLAIM 7 AS SAYING, USE ANY KIND OF STRUCTURE THAT WILL ALLOW YOU TO HANDLE VARIABLE WIDTH OPERANDS.

MR. OTTESON: WELL, I THINK THAT'S RIGHT. I THINK THAT IS WHAT CLAIM 7 SAYS. IT'S TALKING ABOUT USING VARIABLE WIDTH OPERANDS, BUT USE ANY STRUCTURE YOU WANT TO DEAL WITH THEM.

THE COURT: OKAY.

MR. OTTESON: BUT CLAIM 1 DOESN'T SAY ANYTHING ABOUT HOW TO HANDLE OPERANDS. AND SO I --

THE COURT: YOU'RE POINT IS IT'S AGNOSTIC AS TO THAT POINT.

MR. OTTESON: EXACTLY, EXACTLY. AND WE SHOULDN'T BE READING, YOU KNOW, SOME KIND OF LIMITATION ON TO THE STRUCTURE IN TERMS OF HANDLING OPERANDS. IT JUST ISN'T SUPPORTED BY THE CLAIM.

THE COURT: NOT ONLY IS IT ERRONEOUS TO IMPORT A DEPENDANT LIMITATION, IN AN INDEPENDENT CLAIM, IT WOULD BE EVEN MORE ERRONEOUS IN SOME WAYS TO TAKE A PARTICULAR KIND OF STRUCTURE CLAIM AND DEPENDANT CLAIM AND PUT IT ALL THE WAY BACK ON THE INDEPENDENT CLAIM.

MR. OTTESON: ABSOLUTELY. THAT'S RIGHT.

SO THIS IS THE EXAMPLE OF THESE INSTRUCTIONS WHICH WE TALKED ABOUT THAT ARE IN THE SPECIFICATION THAT DON'T HAVE OPERANDS THAT NEED TO BE RIGHT JUSTIFIED.

AND BASICALLY WHAT THEY'RE POINTING TO IS A STATEMENT IN THE FILE HISTORY FROM 1994, IN WHICH THE EXAMINER SAID, WITH RESPECT TO CLAIM 1, AT THAT TIME, OPERAND WIDTH IS VARIABLE AND RIGHT-ADJUSTED. BUT THE FACT OF THE MATTER IS CLAIM 1 HAS BEEN WITHDRAWN, AND SO THERE WAS NO INSTRUCTION REGISTER THAT THAT LANGUAGE WAS APPLYING TO.

IN FACT, THERE WAS NO INSTRUCTION REGISTER IN WHAT

BECAME CLAIM 1 OF THE '749 PATENT UNTIL 16 YEARS LATER.

THE COURT: COMING UNDER THE RE-EXAM.

MR. OTTESON: DURING RE-EXAMINATION.

THE COURT: YEAH, OKAY.

MR. OTTESON: SO WE THINK THIS IS PRETTY STRAIGHT FORWARD. THE CONSTRUCTION SHOULD BE "A REGISTER TO HOLD THE NEXT INSTRUCTION OR INSTRUCTIONS TO BE EXECUTED."

THE COURT: ALL RIGHT. THANK YOU VERY MUCH.

MR. OTTESON: THANK YOU, YOUR HONOR.

THE COURT: MR. CHEN, ARE YOU GOING TO HANDLE THIS ONE?

MR. CHEN: YES. YOUR HONOR, MY NAME IS KYLE CHEN. I REPRESENT HTC.

SO BEFORE WE GO INTO THE ARGUMENTS, I WOULD LIKE TO GO THROUGH A LITTLE BIT OF A TUTORIAL BECAUSE EARLIER WE DIDN'T HAVE A CHANCE TO TALK ABOUT DIFFERENT TYPE OF INSTRUCTION REGISTER. THAT MEANS DISCLOSED IN CLAIM IN THE '749 PATENT.

SO, JUDGE WARE DIDN'T CONSTRUE THIS TERM. INSTEAD JUDGE WARE SAID THAT WELL, YOU KNOW, THE ONE, ONE OF ORDINARY SKILL IN THE ART WOULD UNDERSTAND INSTRUCTION REGISTER TO BE INSTRUCTION REGISTER THAT HOLDS ADDRESS OF THE NEXT INSTRUCTION TO BE EXECUTED, OR SOMETHING OF THAT SORT. SO THAT CONSTRUCTION WAS SUBJECT TO THE ADDITIONAL BRIEFING, AS YOUR HONOR KNOWS.

SO, ORIGINALLY THE DIFFERENCE BETWEEN THE TWO

SIDES' CONSTRUCTION IS REALLY JUST WHETHER OR NOT IF THERE ARE ANY OPERANDS IN THE INSTRUCTION REGISTER THEY MUST BE RIGHT JUSTIFIED. SO THAT'S THE DISPUTE.

SO, LET'S TAKE A STEP BACK AND FIRST UNDERSTAND WHAT AN OPERAND IS. SO OPERAND IS REALLY THE DATA SUBJECT TO AN OPERATION. SO IN AN INSTRUCTION YOU TYPICALLY HAVE LIKE OPCODES AND OPERANDS. AND THIS EXPRESSION, 2 + 3, SHOWS WHAT THAT IS. SO THE OPCODE WOULD BE LIKE THE PLUS AND THE OPERANDS ARE 2 AND 3.

SO DEFENDANTS ACTUALLY RAISE AN EXAMPLE THAT THEY CLAIM THAT THERE ARE CERTAIN PORTION OF THE INSTRUCTION TO BE WHAT THEY CALL FIXED WIDTH OPERAND. I WOULD LIKE TO BRING YOUR HONOR'S ATTENTION TO THIS WHERE HERE IT'S ACTUALLY THE DATA THAT IS THE OPERAND, MEANING THAT IT'S ACTUALLY THE INFORMATION THAT'S BEING OPERATED UPON. THAT'S CALLED AN OPERAND IN THE '749 PATENT.

LATER, I'M GOING TO GO INTO THE ACTUAL TYPING AND DISCLOSURE TO EXPLAIN THE DIFFERENCE.

THE COURT: SO, MR. CHEN, IF I COULD JUST ASK YOU A QUESTION ABOUT THAT.

MR. CHEN: SURE.

THE COURT: ARE YOU SAYING THAT THE EXAMPLES OF FIXED WIDTH OPERANDS THAT I WAS POINTED TO A FEW MINUTES AGO ACTUALLY AREN'T OPERANDS AS THAT TERM IS USED IN THE PATENT; IS THAT THE BASIC POINT?

MR. CHEN: THAT'S THE BASIC POINT. EXACTLY, YES.

SO YOUR HONOR KNOWS THAT BIT AND BYTE, SO BIT IS JUST ONE -- SO HERE, THE INSTRUCTION REGISTER IN THIS PARTICULAR PATENT IS 32-BIT INSTRUCTION REGISTER, WITH 4 BYTES. AND THEY CAN HOLD INSTRUCTIONS, AND THEN USUALLY YOU SAY, FOR EXAMPLE, 16-BIT INSTRUCTION WOULD BE 8-BIT OPCODE, AND 8-BIT OPERAND, AND SO ON.

SO, IN THE '749 PATENT, THE ONLY OPCODE THAT IS DISCLOSED IS 8-BIT WIDE. AND FOR AN OPERAND, IF PRESENT, ITS VARIABLE, IT CAN BE, 8, 16 OR 24 BITS.

AND IT IS NOT DISPUTED THAT THE VARIABLE WIDTH OPERANDS MUST BE RIGHT-JUSTIFIED IN THE INSTRUCTION REGISTER. SO THE DEFENDANTS IN THEIR RESPONSIVE BRIEF ACTUALLY MENTIONED THAT WELL, YOU KNOW, OPERANDS ARE NOT REQUIRED.

BUT THAT'S NOT WHAT WE ARE PROPOSING. WE ARE SAYING IF YOU HAVE OPERANDS THAT ARE PRESENT, THEN THAT, THEN THEY MUST BE RIGHT-JUSTIFIED IN THE INSTRUCTION REGISTER. WE'RE NOT SAYING THAT OPERANDS MUST BE THERE.

WE ARE SAYING THE INSTRUCTION REGISTER AS DISCLOSED IN THE '749 PATENT MUST ACCOMMODATE THE SITUATION WHEN YOU HAVE VARIABLE WIDTH OPERANDS AND THEY ARE RIGHT-JUSTIFIED.

SO THIS WOULD BE THE SITUATION WHEN YOU HAVE VARIABLE WIDTH OPERANDS. YOU CAN HAVE LIKE ONE 8-BIT, OR 8-BIT OPCODE WITH 16-BIT, OR 8-BIT OPCODE WITH 24-BIT. SO THAT IS WITH VARIABLE WIDTH OPERANDS.

THE TRADITIONAL CPU, BECAUSE WHEN YOU WANT TO PERFORM THE OPERATION ON THE OPERAND, YOU NEED TO KNOW WHERE THE OPERAND IS.

THE COURT: RIGHT.

MR. CHEN: AND BECAUSE IN THEIR INSTRUCTION REGISTER IT'S JUST REALLY BUNCH OF 0 AND 1'S. YOU NEED TO ACTUALLY KNOW WHERE THE OPERAND STARTS AND WHERE OPERAND ENDS. SO THIS WOULD REQUIRE ADDITIONAL CIRCUITRY IN THE INSTRUCTION REGISTER IN ORDER TO ACCOMMODATE THAT RECOGNITION.

HERE, IN THE '749, WHAT THEY FIGURED OUT IS TO SAY WELL, YOU KNOW, I HAVE THIS MAGIC, THEY USED A LOT OF ABSOLUTE LANGUAGE IN THE SPECIFICATION. WE HAVE THIS MAGIC. AND IT'S POSSIBLE ONLY BECAUSE OPERANDS MUST BE RIGHT-JUSTIFIED IN THE INSTRUCTION REGISTER. AND THIS MEANS THAT THE LEAST SIGNIFICANT BIT OF THE OPERAND IS ALWAYS LOCATED IN THE LEAST SIGNIFICANT BIT OF THE INSTRUCTION REGISTER.

IN DOING SO, WHAT IT IS ALLOWED IS THAT IT CAN USE THE SAME OPCODE FOR DIFFERENT WIDTH OPERANDS. THAT SIMPLIFIES THE PROCESSOR BY SIMPLIFYING THE INSTRUCTION REGISTER AND BY SIMPLIFYING THE INSTRUCTION SET.

SO TRADITIONALLY YOU NEED A SEPARATE OPCODE FOR EACH LENGTH OF THE OPERANDS. NOW, THEY JUST USE THE SAME OPCODE. AND HOW DO THEY FIGURE OUT THE WIDTH OF THE OPERAND? ALL THEY NEED TO DO IS TO SAY OH, HERE'S MY OPCODE, AND I JUST, YOU KNOW, LOOK THROUGH THE END OF THE INSTRUCTION REGISTER I

FIGURE OUT WHERE MY OPERAND IS. SO THIS IS THE SPECIAL MAGIC THAT THEY HAVE.

THE COURT: SO IS THE, IN THIS EXAMPLE, THE 16-BIT OPERAND BEING READ FROM RIGHT TO LEFT?

MR. CHEN: I GUESS, THAT'S A WAY TO LOOK AT IT. YEAH.

YOU START WITH THE LEAST SIGNIFICANT BIT. AND WHEN YOU REACH THE OPCODE, YOU KNOW --

THE COURT: THAT'S WHEN YOU KNOW YOU'RE DONE.

MR. CHEN: YEAH. EXACTLY, YES. SO THAT'S HOW YOU KNOW --

THE COURT: GOT IT.

MR. CHEN: -- WHERE YOUR OPERAND IS.

SO SIMILARLY FOR 24-BIT, THAT'S THE SAME THING. SO THE MAGIC OF THE INVENTION IS USE OF RIGHT-JUSTIFIED OPERANDS ALLOWS THE SAME OPCODE TO BE USED REGARDLESS OF THE OPERAND WIDTH, RESULTING IN SIMPLIFIED CIRCUITRY FOR THE INSTRUCTION REGISTER. WHAT DOES THIS MEAN?

THIS MEANS ON THE FLIP SIDE, IF YOU PUT IN OPERANDS THAT ARE NOT RIGHT-JUSTIFIED, BECAUSE THE INSTRUCTION REGISTER IS ALREADY SIMPLIFIED, SUDDENLY THOSE THINGS WON'T WORK ANYMORE. BECAUSE FOR THE SAME OPCODE TO BE USING VARIABLE WIDTH OPERANDS YOU ALREADY ACCOMPLISH THE GOAL IN THE PATTERN, WHICH IS TO HAVE THIS SPECIAL INSTRUCTION REGISTER THAT WILL WORK WITH THE RIGHT-JUSTIFIED VARIABLE WIDTH OPERANDS.

SO THIS IS JUST SOME LAW YOUR HONOR ALREADY KNOWS. BASICALLY THEY SAY THAT SPECIFICALLY MADE CLEAR, THEY SPECIFICALLY MAKE CLEAR THAT THE OPERAND MUST BE RIGHT-JUSTIFIED IN THE INSTRUCTION REGISTER. AND THE REQUIREMENT MUST THEREFOR BE INCORPORATED INTO A PROPER CLAIM CONSTRUCTION BECAUSE WHEN THEY SAY WELL, IT MUST BE RIGHT-JUSTIFIED IT MEANS THAT THINGS THAT ARE NOT RIGHT-JUSTIFIED CANNOT BE INCLUDED IN THE CLAIM SCOPE.

AND SIMILARLY THE LAW ALSO SAYS IF YOU DESCRIBE A PARTICULAR EMBODIMENT OR PARTICULAR FEATURE TO BE IMPORTANT TO YOUR INVENTION, HERE AGAIN, THEY SAY THE MAGIC, THE ADVANTAGE, AND IT MUST ALWAYS BE THAT WAY. THAT WILL RESULT IN A NARROWER CONSTRUCTION THAN JUST THE PLAIN MEANING OF THE TERM.

SO, SO WITH THAT STRONG INDICATION IN THIS SPECIFICATION, THERE IS ACTUALLY CORROBORATING EVIDENCE IN THE PROSECUTION HISTORY. SO IN THE ORIGINAL PROSECUTION, THERE'S THIS INTERVIEW SUMMARY WHERE APPARENTLY THE APPLICANTS TOLD THE PTO THAT OPERAND WIDTH IS VARIABLE AND MUST BE RIGHT-ADJUSTED, WHICH IS REFERRING TO THE RIGHT-JUSTIFICATION. AND THE DEFENDANTS ARE TRYING TO SAY WELL, THIS IS REALLY REFERRING TO THE DEPENDANT CLAIM.

BUT IN THE RECORD THE EXAMINER DIDN'T ACTUALLY REFER TO ANY OF THE, YOU KNOW, THE CLAIM 11, WHICH WAS WHAT THE DEFENDANTS WERE TRYING TO REFER TO. BUT THAT WAS NOT PART OF A DISCUSSION. THE DISCUSSION WAS ABOUT CLAIM 3, WHICH WAS THE

FIRST ACTIVE CLAIM UNDER RE-EXAMINATION. AND CLAIM 3 ACTUALLY ISSUED AS CLAIM 1.

SO IT'S VERY CLEAR THAT THIS RECORD SAYING CLAIM 1 IS ACTUALLY REFERRING TO CLAIM 3, THAT WAS ACTUALLY DISCUSSED IN THE INTERVIEW. THERE IS NO OTHER WAY TO MAKE INFERENCE FROM THIS RECORD.

THE COURT: ALL RIGHT. WELL, LET ME ASK, IT'S NOT ENTIRELY CLEAR TO ME ANYWAY, AND ONLY BECAUSE I'M STRUGGLING TO KEEP TRACK OF THE PROGRESSION OF CANCELLATIONS AND RE-NUMBERING OF CLAIMS.

ARE YOU SAYING HERE THAT THAT WHICH BECAME CLAIM 1 OF THE '749 PATENT IS WHAT THE EXAMINER IS REFERRING TO AS CLAIM 1 HERE IN THE HIGHLIGHTED LANGUAGE?

MR. CHEN: THAT'S RIGHT. YEAH.

THE COURT: OKAY.

MR. CHEN: AND BECAUSE, ONE, THE EXAMINER WAS REFERRING TO SEVERAL CLAIMS THAT WERE DISCUSSED, THAT WERE BEING DISCUSSED. THAT INCLUDED CLAIM 3. WHICH WAS FIRST ACTIVE CLAIM BECAUSE THE THEN CLAIM 1 AND THEN CLAIM 2, ONE WAS WITHDRAWN, THE OTHER ONE WAS CANCELLED. SO THAT WAS THE FIRST ONE. AND THAT ONE, APPARENTLY THE EXAMINER LATER RENUMBERED IT TO BE CLAIM 1.

AND AS I WILL EXPLAIN LATER, THE INSTRUCTION REGISTER IS ACTUALLY PART OF CLAIM 1, OR THEN CLAIM 3 ALWAYS, BECAUSE OF THE CORRESPONDING STRUCTURE IN MEANS PLUS FUNCTION

ELEMENT.

SO DEFENDANTS ARE TRYING TO SAY THAT THE SINGLE BYTE INSTRUCTIONS DO NOT REQUIRE RIGHT-JUSTIFIED OPERAND. THAT IS ACTUALLY CONSISTENT WITH WHAT WE TALKED ABOUT EARLIER. SO I WON'T REPEAT IT HERE.

AND THEN THEY SAY THAT WELL, THE INSTRUCTION REGISTER WAS RECITED LIKE 16 YEARS LATER. IT WAS NOT A PART OF THE INTERVIEW, WHATEVER THAT WAS. THAT'S NOT TRUE. BECAUSE CLAIM 1 HAS THIS "MEANS FOR FETCHING INSTRUCTIONS" WHICH HAS A CORRESPONDING STRUCTURE. AND IT IS NOT DISPUTED THAT THE MEANS FOR FETCHING INSTRUCTIONS INCLUDES THE INSTRUCTION REGISTER 108, AS DISCLOSED IN THE PATENT TO BE PART OF IT'S CORRESPONDING STRUCTURE. THAT WAS IN DEFENDANTS' ORIGINAL PROPOSED CONSTRUCTION FOR THIS TERM, TO INCLUDE INSTRUCTION REGISTER 108.

AND DURING PROSECUTION, THE APPLICANTS, OR THE, YOU KNOW -- I GUESS AT THAT POINT DURING THE RE-EXAMINATION WAS REALLY TPL, ACTUALLY TOLD THE EXAMINER THAT THIS MEANS PLUS FUNCTION ELEMENT INCLUDES INSTRUCTION REGISTER 108 IS PART OF THE CORRESPONDING STRUCTURE.

SO, OKAY, SO HERE IS ACTUALLY THE ONE I WAS TALKING ABOUT. SO IN THE RE-EXAM HISTORY, THEY ACTUALLY SAID "THE INSTRUCTION REGISTER IS AMONG THE CORRESPONDING STRUCTURE WITH RESPECT TO THE MEANS FOR FETCHING INSTRUCTIONS." THAT'S AN ACTUAL QUOTE WHICH THEY TOLD THE PTO, AND THE PUBLIC, WHICH IS

ENTITLED TO REPLY UPON THEIR STATEMENT.

SO, SO THEN IT BECOMES CLEAR THAT INSTRUCTION REGISTER HAS ALWAYS BEEN PART OF CLAIM 1. AND THEY ARE ACTUALLY NOT DISPUTING THAT THE INSTRUCTION REGISTER IN CLAIM 1 CAN ACCOMMODATE BOTH THE SITUATION WHERE YOU HAVE FOUR 8-BIT INSTRUCTIONS, WHEN THERE ARE NO OPERANDS, OR YOU HAVE AN OPERAND WHICH MUST BE RIGHT-JUSTIFIED. SO, SO I'M JUST SHOWING THAT BOTH OF THEM NEED TO BE ACCOMMODATED IN CLAIM 1, BASED ON THE CLEAR STATEMENTS THEY MAKE IN THE SPECIFICATION.

OKAY. SO HERE WE COME TO THE EXAMPLE THEY'RE CITING. SAYING OH, YOU KNOW, VARIABLE WIDTH OPERANDS, THAT CAN BE THERE BUT WE ACTUALLY HAVE IN THE PARTICULAR EMBODIMENT THAT HAS THIS FIXED-WIDTH OPERAND. BUT THAT'S ACTUALLY NOT TRUE. THAT'S NOT WHAT THE SPECIFICATION DISCLOSES.

IN FACT, THE '749 SPECIFICATION DISCLOSES NO 4 BIT OPERAND. ALL OPERANDS IN THE SPECIFICATION ARE 8, 16 OR 24 BITS. THE PARTICULAR INSTRUCTION THEY ARE CITING, "THE READ- OR WRITE-LOCAL-VARIABLE XXX IS A SINGLE BYTE INSTRUCTION THAT READS OR WRITES THE XXX LOCATION RELATIVE TO THE TOP OF THE RETURN STACK, BUT CONTAINS NO OPERANDS." SO WHAT'S THE DIFFERENCE?

THE DIFFERENCE IS THAT THAT XXXX IS THE LOCATION OF THE TEMPORARY STORAGE WHERE THE OPERAND IS, BUT IS NOT THE OPERAND ITSELF.

THEIR TECHNOLOGY THAT I WAS THINKING ABOUT, THE WAY

TO LOOK AT IT, IT'S LIKE A BOOK. YOU HAVE A PAGE NUMBER AND THEN YOU HAVE THE CONTENT ON THAT PAGE. THOSE TWO ARE NOT THE SAME THING.

IN THE '749 PATENT, THEY ALWAYS REFER TO ONLY THE CONTENT OF A PARTICULAR PAGE TO BE THE OPERAND. THEY NEVER REFER TO THE RELATIVE POSITION SUCH AS THIS ONE TO BE AN OPERAND. WHICH IS EQUIVALENT TO A PAGE NUMBER. WHERE IT'S JUST SAYING WHERE THE CONTENT OF THIS DATA IS LOCATED, IT'S AN OPERAND. AND THE '749 SPECIFICATION NEVER REFERRED TO THIS AS AN OPERAND. THERE'S NO SUPPORT WHATSOEVER WITH THIS ASSERTION. NOT INTRINSICALLY, NOT EXTRINSICALLY.

SO THEN, THE DEFENDANTS TALK ABOUT JUDGE WARD'S RULING. ACTUALLY, IT IS TRUE THAT JUDGE WARD WAS CONSTRUING A DIFFERENT TERM "INSTRUCTION GROUPS." BUT, THAT CONSTRUCTION CAME FROM THE SAME EMBODIMENT THAT THE INSTRUCTION REGISTER 108 IS BEING, AS BEING PART OF THE CORRESPONDING STRUCTURE OF THAT MEANS PLUS FUNCTION ELEMENT.

AND THE SPECIFICATION OF '584, WHICH WAS ACTUALLY PART OF THIS ACTION BEFORE, BUT THEY STIPULATED TO NON INFRINGEMENT AND DROPPED IT, SHARES EXACTLY THE SAME SPECIFICATION AS '749. SO EVERYTHING IS THE SAME. PARTICULAR EMBODIMENT THAT IS BEING RELIED UPON TO HAVE THESE CLAIMS ARE THE SAME EMBODIMENT BEING RELIED UPON IN '584.

AND, NOT JUST THAT, ACTUALLY WHEN JUDGE WARD CONSTRUED THE TERM "INSTRUCTION GROUP" THE PARTICULAR FINDING,

THE PARTICULAR FACT THAT JUDGE WARD SAID IN HIS RULING WAS ACTUALLY THAT THE SPECIFICATION AND PROSECUTION HISTORY REFERRED TO THE FACT THAT THE OPERANDS IN THE INSTRUCTION REGISTER MUST BE RIGHT-JUSTIFIED.

SO, SO ALTHOUGH THE CONSTRUCTION WAS ON A DIFFERENT TERM, BUT THE PARTICULAR INTRINSIC EVIDENCE WAS REALLY ABOUT THE INSTRUCTION REGISTER. AND THE OPERANDS IN THE INSTRUCTION REGISTER MUST BE RIGHT-JUSTIFIED. AND JUDGE WARD USED THAT TO FIND THE CONSTRUCTION OF THE "INSTRUCTION GROUP."

SO IF THERE'S A CAUSE AND RESULT, THAT THE CAUSE IS TO HAVE THIS PARTICULAR INSTRUCTION REGISTER IN WHICH THE OPERANDS ARE RIGHT-JUSTIFIED, THAT RESULTED IN THAT CONSTRUCTION. SO THIS IS THE SOURCE, AND THIS MUST BE INCORPORATED.

THE COURT: ISN'T THERE ANOTHER WAY -- SORRY, FOR INTERRUPTING, MR. CHEN.

MR. CHEN: NO PROBLEM.

THE COURT: ISN'T THERE ANOTHER WAY TO DEAL WITH THAT ISSUE? WHICH IS TO SAY, UNDOUBTEDLY JUDGE WARD WAS DEALING WITH THE INSTRUCTION GROUP, BUT IF I LOOK AT THE '749 CLAIM 1 THAT IS BEING ASSERTED IN THIS CASE TODAY, THIS CURRENT CLAIM INCLUDES, FOR EXAMPLE, THE TERM "INSTRUCTION." IT INCLUDES THE TERM "MULTIPLE SEQUENTIAL INSTRUCTIONS." WE COULD PRESUMABLY GET AT THE RIGHT JUSTIFICATION OF THE OPERAND BY CONSTRUING ANY ONE OF THOSE OTHER TERMS AS WELL.

I TAKE IT YOUR POINT IS IT'S GOT TO BE IN THERE SOMEWHERE, THIS NOTION OF WHAT THE INVENTION IS.

MR. CHEN: YES, EXACTLY.

BECAUSE, YOU KNOW, LIKE YOUR HONOR EARLIER OBSERVED THE INSTRUCTION GROUP IS ALSO TALKING ABOUT MULTIPLE SEQUENTIAL INSTRUCTIONS. THAT IS THE SAME MULTIPLE SEQUENTIAL INSTRUCTIONS BEING RECITED HERE. BUT THE WHOLE POINT ABOUT THAT IS FOR THOSE WHOLE MULTIPLE SEQUENTIAL INSTRUCTIONS TO BE HELD IN THE INSTRUCTION REGISTER, IF ANY OPERANDS ARE PRESENT, THEY MUST BE RIGHT-JUSTIFIED. THAT IS ACTUALLY NOT SOMETHING THAT IS BEING DISPUTED.

THE COURT: ALL RIGHT.

MR. CHEN: ALL RIGHT. THANK YOU.

THE COURT: THANK YOU VERY MUCH, MR. CHEN.

MR. CHEN: THANK YOU.

THE COURT: ANY REBUTTAL?

MR. OTTESON: YES. VERY BRIEFLY, YOUR HONOR.

MR. CHEN SAID THAT THE ADDRESS IN THOSE READ AND WRITE OPCODES, I MEAN READ AND WRITE INSTRUCTIONS WERE NOT OPCODES. I DON'T REALLY UNDERSTAND WHY THEY WOULDN'T BE. I MEAN, THEY'RE EXACTLY ANALOGOUS TO A NUMBER THAT YOU'RE GOING TO DO AN OPERATION ON. SO, THAT'S THE FIRST THING.

ALSO, YOU KNOW, MORE FUNDAMENTALLY, WE'RE TALKING ABOUT DIFFERENT CLAIMS, DIFFERENT PATENTS, DIFFERENT TERMS. DIFFERENT EMBODIMENTS BETWEEN WHAT JUDGE WAS CONSTRUING AND

WHAT WE'RE LOOKING AT TODAY. AND AS THE COURT WELL KNOWS, YOU'VE GOT TO HAVE A REALLY GOOD REASON TO CRAM LIMITATIONS INTO A CLAIM TERM. AND WE JUST DON'T HAVE THAT HERE.

I MEAN, YOU HAD ASKED ME EARLIER, WITH RESPECT TO RING OSCILLATOR, WHETHER YOU HAD TO FIND THAT THE EXAMINER WAS WRONG WHEN HE CHARACTERIZED THE DISCUSSION WITH RESPECT TO NON-CONTROLLABLE. THE ANSWER TO THAT IS NO. BECAUSE ALL, ALL YOU HAVE TO -- ALL YOU HAVE TO FIND IS THAT THERE IS SOME AMBIGUITY, THAT IT'S NOT CLEAR AND UNAMBIGUOUS.

AND IT'S THE SAME THING HERE. THERE IS NO CLEAR AND UNAMBIGUOUS DISCLAIMER OR DISAVOWAL OF THE USE OF -- THAT WOULD REQUIRE YOU TO READ IN RIGHT JUSTIFICATION OF WHAT GOES INTO THE HARDWARE, WHICH IS WHAT YOU'RE CONSTRUING HERE, WHICH IS THE INSTRUCTION REGISTER.

THE COURT: WOULD YOU, WOULD YOU TEND TO AGREE, MR. OTTESON, IF WE GO BACK TO DEPENDENT CLAIM 7, I WAS ASKING YOU ABOUT THAT A LITTLE WHILE EARLIER.

MR. OTTESON: YES.

THE COURT: WOULD YOU TEND TO AGREE, OR SUGGEST I AGREE, THAT ALL OF THE EXAMPLES MR. CHEN HAS POINTED OUT OF THE RIGHT JUSTIFICATION OF VARIABLE WIDTH OPERANDS WOULD SATISFY THE DEPENDANT CLAIM REQUIREMENT, THAT THERE WILL BE SOME MECHANISM FOR HANDLING THOSE VARIABLE WIDTH? IN OTHER WORDS, IS THAT ONE WAY TO TAKE WHAT HE IS RIGHTLY POINTING TO AND SQUARE IT WITH THE DIFFERENT CLAIMS RELATED?

MR. OTTESON: I THINK SO. BECAUSE CLAIM 7 IS TALKING ABOUT HOW YOU HANDLE OPERANDS.

THE COURT: IT MAY NOT EVEN BE LIMITED TO THAT PARTICULAR STRUCTURE.

MR. OTTESON: CORRECT. EXACTLY.

THE COURT: BUT CERTAINLY WOULD BE ONE WAY OF EXPLAINING WHY IT'S IN THE SPECIFICATION.

MR. OTTESON: YES. THANK YOU, YOUR HONOR.

THE COURT: THANK YOU VERY MUCH.

ANY BRIEF REBUTTAL, MR. CHEN?

MR. CHEN: YES, YOUR HONOR.

THE COURT: SURE.

MR. CHEN: JUST BRIEF REBUTTAL.

WELL, FIRST OF ALL, THEY ARE TRYING TO SAY THIS OPERAND IS, RIGHT JUSTIFICATION IS ABOUT ANOTHER PATENT. APPARENTLY, THEY POINTED OUT TO CLAIM 7, AND THE '749 IS NOT ABOUT ANOTHER PATENT.

SECOND, THERE IS CASE LAW THAT SUGGESTS THAT YOU CANNOT USE A DEPENDANT CLAIM TO BROADEN THE SCOPE OF AN INDEPENDENT CLAIM. HERE, NO MATTER YOU'RE IN THE INDEPENDENT CLAIM OR IN THE DEPENDANT CLAIM, THE RIGHT JUSTIFICATION LIMITATION SHOULD ALWAYS BE THERE BECAUSE IT IS ACTUALLY PART OF THE EMPHASIS MADE BY THE SPECIFICATION.

SO CLEARLY JUDGE WARD FOUND TO, FOUND THAT TO BE THE CAUSE OF THE RIGHT JUSTIFICATION CONSTRUCTION IN THE

INSTRUCTION GROUP. AND THAT WAS ACTUALLY AFFIRMED BY THE FEDERAL CIRCUIT. SO THIS ISSUE HAS BEEN WELL SETTLED AND SHOULD NOT BE DISTURBED.

THE COURT: ALL RIGHT. THANK YOU VERY MUCH.

LET'S TURN TO DMA CPU ISSUE.

MR. BAUM: YOUR HONOR, IF WE COULD, WE'LL TAKE UP THE '890.

THIS IS OUR MOTION FOR RECONSIDERATION.

COURT REPORTER: COUNSEL, CAN I GET YOUR APPEARANCE ON THE RECORD, PLEASE.

MR. BAUM: YES. BRANDON BAUM APPEARING BEFORE YOUR HONOR.

AND I'M SURE THAT THE PLAINTIFFS' LUNCH CONVERSATION WAS THE SAME AS OURS. WHICH IS IT'S SUCH A PLEASURE TO HAVE SOMEBODY WHO UNDERSTANDS ALL OF THE PATENT LAW, SO WE CAN ACTUALLY JUST DIVE RIGHT IN.

THE COURT: WELL, YOU ALL SAY THAT NOW UNTIL YOU APPEAL TO THE FEDERAL CIRCUIT. BUT THANK YOU FOR THAT.

MR. BAUM: WE'LL DROP A FOOTNOTE SAYING THAT.

THE COURT: I WISH I COULD ESTOP YOU ON THAT BASIS, BUT I CAN'T.

MR. BAUM: WE'LL SUBMIT IT.

SO WE'RE TALKING ABOUT THE '890, THE DMA CPU ISSUE. I THINK THE BRIEFING DESCRIBED THE DMA CPU ESSENTIALLY AS BEING SOMETHING THAT WOULD BE KIND OF, OFFLOAD SOME OF THE WORK FROM

THE MAIN CPU. AND HENCE THERE IS, IN OUR VIEW, TWO EMBODIMENTS SHOWN.

SO THERE'S ONE THAT I'LL JUST REFER TO HERE, SO THAT WE DON'T GET CAUGHT UP IN THE LANGUAGE THAT WE'RE CONSTRUING, AS THE DMA COPROCESSOR EMBODIMENT. THIS IS BASICALLY SOMETHING THAT CAN FETCH AND EXECUTE ON ITS OWN. THIS IS IF YOU HAD TWO CPU'S ON THE SAME SILICON.

THE OTHER ONE EMBODIMENT THAT WE BELIEVE IS THERE, AND WE BELIEVE IS NOT COVERED BY JUDGE WARE'S CLAIM CONSTRUCTION, IMPROPERLY, IS WHAT I'LL REFER TO AS A TRADITIONAL DMA CONTROLLER BECAUSE THAT'S WHAT IT'S REFERRED TO. AND IT IS JUST NOT AS SMART AN ENTITY. IT'S ON THERE FOR OTHER REASONS.

SO LET'S --

THE COURT: BEFORE WE, I'M EAGER TO TURN TO THE REST OF YOUR ARGUMENTS, MR. BAUM, BUT CAN I JUST ASK YOU A BASIC QUESTION?

I HAVE ALWAYS UNDERSTOOD CONTROLLERS TO JUST BE KIND OF, AS YOU SAID, DUMB OR STATE MACHINES, JUST PLACES TO HOLD A VARIABLE OR A VALUE; IS THAT GENERALLY CORRECT IN YOUR VIEW?

MR. BAUM: NO. I DON'T THINK SO. FOR SOMETHING, I MEAN, I THINK THEY CAN BE MUCH MORE COMPLEX THAN THAT.

THE COURT: OKAY. ALL RIGHT.

MR. BAUM: SO IT CAN BE -- THE DIFFERENCE,

ACTUALLY, THAT I THINK THERE'S, SOMETIMES THE LINES BLUR BETWEEN A VERY COMPLEX CONTROLLER, MICRO CONTROLLER VERSUS A CPU THESE DAYS. BUT, YES, IT IS MORE FIXED THAN AN ACTUAL CPU.

THE COURT: OKAY.

MR. BAUM: SO HERE'S JUDGE WARE'S CLAIM CONSTRUCTION. AND I THINK WE ENCOUNTER, WE ENCOUNTER THE SAME ISSUES REPEATEDLY HERE TODAY. WHICH IS, SOME OF THESE THINGS, I THINK, AS YOUR HONOR POINTED OUT, SOME OF THESE WORDINGS, IT'S NOT AS IF THEY'RE WRONG; THEY'RE JUST NOT COMPLETELY RIGHT. AND I THINK WE ENCOUNTER THAT A LOT.

WHAT JUDGE WARE PROPERLY CONSTRUED IS THE FIRST EMBODIMENT, THE DMA CPU, OR -- AND I THINK AT SOME POINT WE DO ALL SHORTEN IT TO DMA CPU, BUT IT'S WRITTEN LONGHAND IN THE CLAIMS. AND I THINK SOMETIMES, I THINK THAT CAN LEAD US ASTRAY. JUDGE WARE'S RATIONALE IN CONSTRUING IT, NUMBER ONE, HE POINTED TO A DICTIONARY FROM 1999 AS THE CONSTRUCTION OF CPU.

NOW, WE ALL REMEMBER THE TEXAS DIGITAL ERA WHERE WE WERE ALL BUYING DICTIONARIES FROM THE USED BOOK STORES. BUT A 1999 DEFINITION NEVER WOULD PASS MUSTER, EVEN UNDER TEXAS DIGITAL. AND WE REALLY WANT TO LOOK AT 1989, AT THE TIME OF APPLICATION. BUT LET'S LEAVE THAT ASIDE. I DON'T KNOW THAT THE DEFINITION CHANGED. BUT IT'S NOT THE GREATEST SUPPORT FOR THE CLAIM CONSTRUCTION.

THE SECOND FOOTNOTE, WHICH DESCRIBES DMA CPU,

ENTIRELY ACCURATE. AND IF DMA CPU 72 WAS THE ONLY EMBODIMENT SHOWN IN THE SPECIFICATION, WE WOULD HAVE NO BASIS TO SEEK RECONSIDERATION.

THE OTHER TWO NOTES REFER TO DESCRIPTIONS IN THE VERY OUTSET OF THE PATENT OF THE '890, WHERE IT'S TALKING ABOUT THE BENEFITS OR OBJECTIVES OF THE INVENTION. WE'VE HEARD A LOT ABOUT THAT TODAY. THERE'S BEEN A LOT OF USE OF THE BENEFITS OF THE INVENTION TO CONSTRUE THINGS. I THINK IT WAS FAIRLY CLEAR.

THERE ACTUALLY USED TO BE THE ALL ADVANTAGES RULE. I THINK THE FEDERAL CIRCUIT FLOATED THAT FOR ABOUT THREE WEEKS. AND WE WOULD LOOK TO THE OBJECTIVES OF THE INVENTION. EVERY PATENT PROSECUTOR STOPPED WRITING THOSE IN THE PATENT APPLICATION.

BUT IN PHILLIPS V. AWH, THE WHOLE ISSUE THERE WAS WHETHER OR NOT IF THE BAFFLE WAS AT A 90 DEGREE ANGLE THEN IT WOULDN'T ACTUALLY PERFORM THE FUNCTION, WHICH WAS DEFLECTING BULLETS. AND SO, IT WASN'T A CONSTRUCTION OF BAFFLE. IT DIDN'T HAVE TO INCLUDE AN ACUTE ANGLE.

AND THE FEDERAL CIRCUIT SAID NO, WE'RE NOT LOOKING FOR THE OBJECTIVES OR THE BENEFITS OF THE INVENTION. WE'RE REALLY JUST CONSTRUING WORDS HERE. BECAUSE OTHERWISE WE GET INTO THE INVENTOR'S INTENT, AND DO WE HAVE TO ACHIEVE ALL OF THE INVENTOR'S -- SO ANYWAY.

I THINK, THE RELIANCE THERE, IT'S TRUE, THOSE ARE THE BENEFITS OF DMA CPU 72, BUT I JUST DON'T THINK WE'LL FIND

THAT IT ANSWERS THE ENTIRE STORY.

SO THERE ARE THESE TWO EMBODIMENTS. JUDGE WARE'S CONSTRUCTION, AGAIN, PERFECTLY MATCHES WITH DMA CPU 72 THAT'S SHOWN IN FIGURE 2. BUT DOES IT ADDRESS OR DEAL WITH DMA CPU THAT IS SHOWN IN FIGURE 9? I'VE FORGOTTEN THE NUMBER. I THINK IT'S 314.

SO THAT'S WHAT I'M GOING TO ADDRESS TODAY. OUR POSITION IS, AGAIN, HERE'S SUPPORT FOR JUDGE WARE. ABSOLUTELY CAN COVER 72. AND THAT MAKES SENSE. AND IF THAT'S ALL YOU LOOKED AT, AGAIN, WE WOULDN'T BE HERE TODAY.

SO THE QUESTION IS DOES IT ALSO COVER THIS OTHER EMBODIMENT, WHICH IS DESCRIBED IN THE FIGURE AS A DMA CPU, AND DESCRIBED IN THE SPECIFICATION AS A DMA CPU, BUT IS ALSO, REFERS TO THE MORE TRADITIONAL DMA CONTROLLER.

SO THE QUESTION IS, IS THE TERM "DMA CPU" BEING MISUSED IN THE SPECIFICATION OR IS IT BROADER, IS IT BROAD ENOUGH TO COVER VARIOUS EMBODIMENTS?

OUR POSITION IS UNDER CLAIM CONSTRUCTION PRINCIPLES, ABSENT A GOOD REASON, IT SHOULD BE CONSIDERED TO COVER BOTH. PARTICULARLY WHERE THIS, WHAT NOBODY DISAGREES IS A TRADITIONAL OR CONVENTIONAL DMA CONTROLLER, IS REFERRED TO IN THE SPECIFICATION AS A DMA CPU. WE THINK IT HAS TO BE COVERED.

IS IT JUST OUR SAY SO? OBVIOUSLY, IN THIS CASE BOTH SIDES HAVE, YOU KNOW, EXPERTS WHO OPINE, AND REMARKABLY THE EXPERTS TEND TO AGREE WITH THE PARTY THAT EMPLOY THEM. I'M

SURE THE DISTRICT COURTS ARE SHOCKED BY THAT AT ALL TIMES.

THE COURT: CAN YOU JUST GO BACK TO THAT SLIDE FOR A MOMENT. I'M SORRY. I WANTED TO ASK A QUESTION ABOUT THE EXCERPT HERE.

SO -- AND I'M FOCUSING ON THE SECOND PARAGRAPH. SO THIS SECOND PARAGRAPH IS REFERRING TO THE MICROPROCESSOR AS A WHOLE, AS 310. I DON'T SEE 310. MY EYES ARE GETTING TIRED, I THINK.

BUT, IN ANY EVENT, IT'S REFERRING TO THE CPU, AS A WHOLE, RESIDING ON THE ENTIRE DIE.

MR. BAUM: RIGHT

THE COURT: AND WHAT I'M STRUGGLING WITH, IT SEEMS TO SAY HERE THAT THE DMA PROCESSOR 72 OF THIS MICROPROCESSOR 50 IS, IS NO LONGER ON THE SCENE. IT'S BEEN REPLACED BY 314; RIGHT? WHICH IS THE DMA CONTROLLER.

SO, HOW DO YOU DEAL WITH THAT DISTINCTION OR DICHOTOMY THAT SEEMS TO BE DRAWN, AT LEAST IN THIS SECTION, BETWEEN THE DMA CPU AND THE OLDER DMA CONTROLLER?

THERE SEEMS TO BE A LINE DRAWN BETWEEN THOSE TWO THAT I'M STRUGGLING WITH. AND I BENEFIT FROM YOUR THOUGHTS ON THAT.

MR. BAUM: I THINK THE ONLY WAY YOU CAN RECONCILE THAT DISCUSSION IS TO SAY THAT WHEN THE PATENTEE IS USING THE TERM "DMA CPU" THE PATENTEE MEANS BOTH. BECAUSE OTHERWISE IT DOESN'T MAKE ANY SENSE.

THE COURT: OKAY.

MR. BAUM: OTHERWISE THE FIGURE IS MIS-MARKED.

THE COURT: AND SO, SO YOU WOULD, I THINK, PERHAPS SUGGEST THAT THE FIGURE IS NOT MIS-MARKED. IT PROPERLY REFERS TO DMA CPU. AND YET WHEN YOU LOOK TO COLUMN 12 AND 13, YOU SEE THAT THE APPLICANT, THE PATENTEE IS DESCRIBING THAT DMA CPU BROAD, MORE BROADLY THAN JUST AN ACTUAL CENTRAL PROCESSING UNIT.

MR. BAUM: YES. IT'S JUST USING A GENERIC TERM "DMA CPU."

THE COURT: UNDERSTOOD.

MR. BAUM: NOW, WE CAN SAY, WELL, WHY WOULD HE DO THAT? BECAUSE EVERYONE KNOWS THAT DMA CPU MEANS SOMETHING ELSE. SO WAS THE PATENTEE BEING HIS OWN LEXICOGRAPHER, AND DO WE HAVE ENOUGH EVIDENCE OF LEXICOGRAPHY?

THE COURT: DO I HAVE TO GO THAT FAR?

MR. BAUM: HERE'S WHAT WE THINK. THE MOST PROBATIVE EVIDENCE IS NOT WHAT EXPERTS SAY AFTER LITIGATION IS, BUT WHAT DID ORDINARY PEOPLE THINK WHEN THEY'RE READING THIS THING BACK IN THE DAY? AND NOT ORDINARY PEOPLE, BUT PHOSITAS REVIEWING THE PATENT. AND LET'S ASSUME THE EXAMINERS OR THE APPLICANT WERE PHOSITAS; WHAT DID THEY THINK?

WELL, THE WAY THEY TALK ABOUT IT IS AS IF IT COVERS BOTH EMBODIMENTS.

WHAT DID THE THIRD PARTY WHO SOUGHT RE-EXAMINATION

THINK? THE THIRD PARTY, FISH AND RICHARDSON ON BEHALF OF AN ANONYMOUS PARTY PRESUMABLY, ASSERTED DMA CONTROLLER ART AGAINST THAT PARTICULAR LIMITATION. AND THE RE-EXAMINER ADOPTED THAT AND ACCEPTED THAT. NOBODY SAID, OH, WAIT A MINUTE, YOU KNOW, THAT'S A DIFFERENT, IT'S COMPLETELY DIFFERENT; IT'S NOT A DMA CPU.

SO EVERYONE INVOLVED IN THE PROSECUTION WHO DIDN'T HAVE AN AXE -- WELL, FISH AND RICHARDSON HAD AN AXE TO GRIND, BUT PEOPLE WHO DIDN'T KNOW ABOUT THIS PARTICULAR NARROW ISSUE ALL MAKE THIS ASSUMPTION. AND IT'S ONLY NOW THAT WE BEGIN TO NARROW IT AND SAY OH, IT ONLY COVERS THE 72 EMBODIMENT AND NOT THE '314. SO I THINK YOU CAN AT LEAST USE THAT AS SOME CIRCUMSTANTIAL EVIDENCE THAT MOST FOLKS, WHEN THEY SAY DMA CPU, MEAN IN THE BROADER SENSE.

WE DO BELIEVE THAT THE RESTRICTION REQUIREMENT ALSO HELPS INFORM WHAT PEOPLE WERE THINKING. IN RAMBUS V. INFINEON THE FEDERAL CIRCUIT FOUND THAT TO BE VERY IMPORTANT, AND THAT THE RESTRICTION REQUIREMENT ACTUALLY KIND OF OVERCAME WHAT HAD BEEN THE CLAIM CONSTRUCTION IN THE DISTRICT COURT.

THIS IS, AGAIN, FOR TIRED EYES, BUT IF YOU SEE HOW THE '890 EVOLVED, WE WENT FROM, YOU KNOW, THE RESTRICTION OF THE GROUP 3, WHICH WERE SPECIFIC DMA 72 EMBODIMENTS, BUT THIS, THIS HAD A DMA IN IT. AND YET, THAT WAS LEFT OVER HERE. SO IT'S A COMPLETELY DIFFERENT GROUP. SO AT LEAST AT THAT TIME IN THE RESTRICTION REQUIREMENT, AND NOBODY OBJECTED TO IT, THEY

WERE TREATING THEM AS SEPARATE ENTITIES BUT BOTH COVERED.

THERE'S THE RESTRICTION REQUIREMENT. THEY'RE ACTUALLY EVEN IN DIFFERENT SUBCLASSES. GROUP 3 IS DMA FOR FETCHING THE SMART CPU. AND GROUP 8 IS JUST A MICROPROCESSOR ARCHITECTURE, EVEN THOUGH IT HAD A DMA IN IT.

HAD THE CLAIM TERM MEANT WHAT JUDGE WARE SAYS IT MEANT, HAD EVERYONE UNDERSTOOD THAT, THAT ACTUALLY, YOU CAN'T REALLY RECONCILE THAT. YOU'D SAY THE EXAMINER MADE A MISTAKE AND SHOULD HAVE SLIPPED THESE CLAIMS OVER INTO THAT GROUP 3. SO THAT'S JUST FURTHER CIRCUMSTANTIAL EVIDENCE THAT IT HAS THIS BROADER MEANING.

THE -- (CONFERS WITH CO-COUNSEL)

MY ESTEEMED COUNSEL POINTS OUT TO ME THAT WE HAVE OTHER CONCERNS WITH THE OVERALL CONSTRUCTION. I THINK THAT'S ACTUALLY TRUE WITH A COUPLE OF THE OTHER CLAIM CONSTRUCTIONS. AND ANYONE WHO'S PRACTICED IN FRONT OF JUDGE WARE RECOGNIZES THAT WHEN -- THERE'S A REASON WHY HE OFTEN, HE MIGHT CALL SOMETHING THE "FIRST" CLAIM CONSTRUCTION ORDER.

BECAUSE HE WAS, YOU KNOW, THE KIND OF JUDGE WHO RECOGNIZED THAT THERE MIGHT BE A MISTAKE. THESE THINGS ARE COMPLICATED. AND IF PEOPLE COULD BRING TO HIS ATTENTION NEW INFORMATION THAT MIGHT CAUSE HIM TO CHANGE HIS MIND, HE WAS NOT ABOVE RECOGNIZING. HE WANTED TO DO THE RIGHT THING. AS I'M SURE ALL JUDGES DO. BUT HE WAS QUITE OPEN TO THAT.

THE COURT: YEAH. I'M NOT SURE ALL JUDGES DO. BUT

HE CERTAINLY DOES.

MR. BAUM: WELL, THAT'S TRUE.

THE COURT: BUT, YOUR POINT, AM I LOOKING AT THE --

MR. BAUM: SO THIS IS THE REQUESTOR.

THE COURT: THIS IS THE FISH AND RICHARDSON RE-EXAM?

MR. BAUM: RIGHT. I THINK WE'VE ALREADY TALKED ABOUT THAT.

THE COURT: YEAH.

MR. BAUM: BUT THIS IS BASICALLY, THEY'RE JUST SAYING DMA CONTROLLERS WERE WELL KNOWN, AND THEREFOR THIS ANTICIPATES. AND, SURE ENOUGH, THEY GO ON TO SAY MORE ABOUT THAT, ON-CHIP DMA CONTROLLER ANTICIPATES THE DMA CPU.

AND THE EXAMINER SAYS YEAH, YOU'RE RIGHT. I'LL LOOK AT THIS. IT DOES SEEM TO BE, YOU HAVE AN SNQ, SUBSTANTIAL NEW QUESTION, BECAUSE OF THOSE DMA CONTROLLER ART.

NO, HEY WAIT A MINUTE, THAT'S NOT THE SMART CPU EMBODIMENT.

SO, OUR POSITION IS THAT THE JUDGE ERRED BY LIMITING THE CONSTRUCTION TO THE SINGLE EMBODIMENT. AND ACTUALLY THE CORRECT CONSTRUCTION IS AN ELECTRICAL CIRCUIT FOR READING AND WRITING TO MEMORY THAT IS SEPARATE FROM THE MAIN CPU.

NOW, THAT BRINGS UP THE ISSUE THAT WAS JUST BROUGHT TO MY ATTENTION, WHICH IS JUDGE WARE'S CONSTRUCTION ALSO

REQUIRES SOME SORT OF INDEPENDENCE. THERE'S, THAT THE DMA CPU HAS TO OPERATE INDEPENDENTLY OF -- AND TO BE PERFECTLY HONEST, THERE REALLY WOULDN'T BE THAT MUCH POINT OF PUTTING THE TWO THINGS ON THE SAME PIECE OF SILICON. THERE REALLY ISN'T, ONCE YOU GET ON-CHIP, THINGS ARE ACTING INDEPENDENTLY.

AND I DON'T THINK ANYONE ACTUALLY EVEN ASKED FOR INDEPENDENT TO BE IN THERE. BUT IF THEY DID, THERE'S REALLY NO AUTHORITY. AND I DON'T THINK THAT WOULD BE SUPPORTED, EVEN WITH THE SMART CPU DESCRIPTION.

THEY WORK TOGETHER. AND, YOU KNOW, ONE IS TAKING WORK FROM THERE. BUT THEY'RE NOT WORKING INDEPENDENTLY AS IF THEY JUST HAPPEN TO BE ON THE SAME DIE.

THE COURT: ARE WE EVEN -- WELL, I'M NOT ENTIRELY CERTAIN WHAT IT WOULD MEAN TO OPERATE INDEPENDENTLY.

MR. BAUM: WHAT IF THEY OPERATED ON THE SAME CLOCK? I MEAN, THAT'S NOT INDEPENDENT. SO, IN ESSENCE, I THINK THERE'S SOME EXTRANEOUS LANGUAGE IN THERE THAT ALSO COULD, IS INCORRECT.

THE COURT: OKAY. ALL RIGHT. THANK YOU VERY MUCH.

WHO'S GOING TO RESPOND?

COURT REPORTER: COUNSEL, CAN I GET YOUR APPEARANCE?

MR. WEINSTEIN: MARK WEINSTEIN. COOLEY FOR HTC.

THE COURT: GO AHEAD, MR. WEINSTEIN.

MR. WEINSTEIN: THANK YOU, YOUR HONOR.

I THINK MR. BAUM CORRECTLY IDENTIFIED THE MAIN DISPUTE ON THIS TERM WHICH IS WHETHER OR NOT A DMA CPU, AND I'LL USE THE SHORTHAND, IS REQUIRED TO FETCH AND EXECUTE INSTRUCTIONS. AND THAT'S THE MAIN DISPUTE.

AS YOU CAN SEE, JUDGE WARE DIDN'T ADOPT EITHER PARTIES' CONSTRUCTION ENTIRELY. BUT THE MOST RELEVANT PART OF THE CONSTRUCTION IS HE DID ADOPT THE REQUIREMENT THAT THE DMA CPU FETCH AND EXECUTE ITS INSTRUCTIONS.

ULTIMATELY, WHAT HE RELIED ON WAS THE PLAIN AND ORDINARY MEANING OF WHAT CPU MEANS. AND JUDGE WARE CITED A DICTIONARY, AND YES IT WAS FROM 1999. AND I KNOW THE PLAINTIFFS, I'M SORRY, THE DEFENSE HAVE MADE A QUIBBLE ABOUT THAT, BUT THEY HAVEN'T ACTUALLY EXPLAINED WHAT ANY PART OF THIS DEFINITION IS INCORRECT.

THE MOST IMPORTANT THING ABOUT THIS DEFINITION IS THAT THE ONLY REAL PART THAT HE ADOPTED HERE IN HIS CONSTRUCTION WAS THE FETCHING AND EXECUTING OF INSTRUCTION. YOU NOTICE THE WORD "DECODES" IS IN THERE. HE DIDN'T PUT THAT IN HIS INSTRUCTION. HE JUST SAID "FETCHES AND EXECUTES INSTRUCTIONS."

AND SO THE QUESTION IS, IS THAT REALLY INCONSISTENT WITH HOW ONE OF ORDINARY SKILL IN THE ART WOULD HAVE UNDERSTOOD A CPU IN 1989 WHEN THE PATENT WAS FILED? ABSOLUTELY NOT, BECAUSE THE SPECIFICATION ACTUALLY DEFINES THE DMA CPU IN EXACTLY THE SAME WAY.

I KNOW WE'VE QUOTED THIS PASSAGE REPEATEDLY. IT SAYS, "THE DMA CPU CONTROLS ITSELF, AND HAS THE ABILITY TO FETCH AND EXECUTE INSTRUCTIONS."

SO JUDGE WARE'S DICTIONARY DEFINITION, THE PLAIN AND ORDINARY MEANING OF CPU IS ENTIRELY CONSISTENT WITH THE WAY THE DMA CPU WAS DESCRIBED IN THE SPECIFICATION OF THE PATENTS.

THE REASON WE THINK JUDGE WARE WAS CORRECT IN ADOPTING A CONSTRUCTION THAT EXCLUDES THE DMA CONTROLLERS IS, AS YOUR HONOR OBSERVED A FEW MINUTES AGO, THERE IS A DISTINCTION IN THE SPECIFICATION BETWEEN THE TWO. IT'S DRAWN OUT REPEATEDLY.

IN THE BACKGROUND OF THE PATENT, THEY TALK ABOUT HOW THERE ARE THESE DMA CONTROLLERS, AND THEY CAN PROVIDE ROUTINE HANDLING OF DMA REQUESTS AND RESPONSES, BUT SOME PROCESSING BY THE MAIN CPU IS REQUIRED. AND THEN WHEN YOU GET INTO THE OBJECT OF THE INVENTION, THEY IDENTIFY AS ONE OF THE OBJECTS IS TO PERFORM A HIGH PERFORMANCE MICROPROCESSOR IN WHICH DMA DOES NOT REQUIRE USE OF THE MAIN CPU DURING DMA REQUESTS AND RESPONSES. THE WAY IT ACCOMPLISHES THAT IS THROUGH THE DMA CPU.

YOUR HONOR ASKED A QUESTION EARLIER OF MR. BAUM, WHICH WAS ISN'T A CONTROLLER JUST REALLY KIND OF A VERY SIMPLE COMPONENT THAT ACTS AS A STATE MACHINE? AND I DON'T KNOW IF DEFENDANTS ARE CHANGING THEIR POSITION ON THAT, BUT THIS WAS THEIR POSITION IN THE CLAIM CONSTRUCTION BRIEF EARLIER IN THIS

CASE, WHICH WAS THEY IDENTIFIED THE "MORE TRADITIONAL DMA CONTROLLER IS ONE THAT FUNCTIONS AS A TRADITIONAL STATE MACHINE -- THAT'S THE PHRASE THAT YOUR HONOR USED -- WITHOUT THE ABILITY TO FETCH ITS OWN INSTRUCTIONS THAT CHARACTERIZES A CPU."

NOW, WHAT'S INTERESTING ABOUT THIS, YOUR HONOR, IS THEY AGREE THAT THE ABILITY TO FETCH AND EXECUTE INSTRUCTIONS IS WHAT CHARACTERIZES A CPU. AND THE TERM "CPU" IS IN THIS TERM. AND IT'S THE PLAIN AND ORDINARY MEANING OF THE TERM IS TO HAVE THIS REQUIREMENT OF FETCHING AND EXECUTING INSTRUCTIONS.

I DON'T THINK I NEED TO GO THROUGH THIS SLIDE BECAUSE IT SOUNDS LIKE THERE'S NOT A DISPUTE THAT A DMA CONTROLLER DOES NOT FETCH OR EXECUTE ITS OWN INSTRUCTIONS.

NOW, THEY GO BACK AND TALK ABOUT THIS OTHER EMBODIMENT. AND I'LL TALK ABOUT IT A LITTLE BIT MORE IN A MINUTE, BUT THE MOST IMPORTANT PART ABOUT THE EMBODIMENT THEY IDENTIFY IS THAT IT ACTUALLY DRAWS OUT THE DISTINCTIONS BETWEEN THE DMA CPU AND A DMA CONTROLLER. THEY TALK ABOUT KEEPING THE CHIP SIZE AS SMALL AS POSSIBLE. AND THEY'RE REPLACING THE DMA PROCESSER WITH A MORE TRADITIONAL DMA CONTROLLER.

NOW, OBVIOUSLY THEY'RE SAYING IT'S BEING REPLACED. IF THEY WERE THE SAME THING, YOU WOULDN'T NEED TO REPLACE ONE WITH THE OTHER. AND THEY'RE ALSO SAYING TO KEEP THE CHIP SIZE AS SMALL AS POSSIBLE. AND THE REASON THE CHIP SIZE IS BEING

KEPT SMALL IS BECAUSE THE DMA CONTROLLER IS A MUCH SIMPLER DEVICE THAN A DMA CPU.

BECAUSE OF THE CAPABILITY OF EXECUTING AND FETCHING INSTRUCTIONS, WHEN YOU LOOK AT, SAY, FIGURE 5, THERE'S ALL THIS LOGIC AND CIRCUITRY TO HANDLE THE DECODING OF THE INSTRUCTION SET WHICH YOU WOULDN'T NEED IN A DMA CONTROLLER.

AND THEN, MR. BAUM TALKED EARLIER ABOUT THIS, THIS QUESTION OF WELL, THERE'S REALLY TWO EMBODIMENTS HERE. AND WE EXPLAINED THIS IN -- THIS WAS AN ARGUMENT THAT CAME UP IN THE REPLY, AND RESPONDED TO IN OUR SUR-REPLY. THERE REALLY ARE THREE EMBODIMENTS HERE, YOUR HONOR. THERE'S THE FIGURE 2, WHICH HAS THE DMA CPU 72. AND THEN THERE'S THE FIGURE 9 EMBODIMENT.

AND WHERE IT'S ACTUALLY DESCRIBED IS NOT WHERE MR. BAUM POINTS TO, WHICH IS IN COLUMN 12, IT'S ACTUALLY DESCRIBED IN FIGURE 9. AND IT BASICALLY SAYS THE FIGURE 9 CPU IS FUNCTIONALLY THE SAME AS THE FIGURE 2. AND IT JUST HAS A LOT MORE ON-CHIP MEMORY.

FOUR COLUMN, AND THAT HAS A DMA CPU 314, AND THAT IS A DMA CPU 314. AND THAT'S IN COLUMN 9. AND IT SAYS, THE MICROPROCESSOR 310 IS EQUIVALENT TO THE MICROPROCESSOR FIGURES 1 TO 8. SO THE SECOND EMBODIMENT IS FIGURE 9 WITH A DMA CPU THAT IS A DMA CPU.

FOUR COLUMNS LATER, WE GET TO COLUMN 12.

THE COURT: LET ME SEE IF I CAN CATCH UP TO YOU ON

THAT. SO WE'RE AT COLUMN 12 NOW?

MR. WEINSTEIN: YES. SO, COLUMN 9 IS WHERE THEY'RE DISCUSSING THE FIGURE 9 EMBODIMENT. AND IF YOU LOOK AROUND LINES 5 THROUGH 10, THEY TALK ABOUT IT AS BEING EQUIVALENT TO THE MICROPROCESSOR 50, AND IT HAVING THE DUAL PROCESSORS 70 AND 72 OF FIGURE 12 -- I'M SORRY, FIGURE 2 OR 314 AND 316.

SO THIS IS A SECOND EMBODIMENT THAT HAS A MAIN CPU AND A DMA CPU. AND IN THIS EMBODIMENT THEY'RE SAYING IT'S BASICALLY THIS EQUIVALENT TO THE EARLIER ONE, IT IS A DMA CPU.

NOW, WE GO FOUR MORE COLUMNS LATER INTO COLUMN 12. AND THEY'RE SAYING, REMEMBER THAT SECOND EMBODIMENT THAT WE'RE TALKING ABOUT, WHICH HAS THE DMA CPU 314, WE'RE GOING TO NOW REPLACE THAT WITH A DMA CONTROLLER. AND SO THAT'S WHAT WE'RE TALKING ABOUT HERE, IS A -- THAT'S WHAT WE'RE TALKING ABOUT HERE, IS A THIRD EMBODIMENT WHERE THEY'RE REPLACING THE DMA CPU WITH A DMA CONTROLLER.

THEY'RE NOT BEING USED INTERCHANGEABLY AT ALL. THEY'RE ACTUALLY BEING USED DISTINCTLY AND FOR DISTINCT EMBODIMENTS.

THE COURT: AND HOW DO YOU, MR. WEINSTEIN, URGE ME TO -- WELL, LET ME BACK UP A SECOND.

LET'S ASSUME I TEND TO AGREE WITH YOU ON THE FACT THAT THERE ARE THESE DIFFERENT EMBODIMENTS, AS MANY AS THREE EMBODIMENTS, AND THAT THEY ARE DISTINCT; IF THAT'S CORRECT, DON'T I NEED TO CONSTRUE THE TERM IN A WAY THAT COVERS EACH OF

THESE EMBODIMENTS, OR AT LEAST AVOIDS EXCLUDING ANY ONE OF THEM?

MR. WEINSTEIN: NO, YOUR HONOR. IN FACT, WE CITED THE CASE, THE TIPS SYSTEMS CASE, AND I'LL JUST QUOTE FROM THE CASE.

THE COURT: YEAH.

MR. WEINSTEIN: OUR PRECEDENT IS REPLETE WITH EXAMPLES OF SUBJECT MATTER THAT IS INCLUDED IN THE SPECIFICATION BUT IS NOT CLAIMED.

THERE IS NO PRINCIPLE IN PATENT LAW IN WHICH A CLAIM CONSTRUCTION HAS TO COVER EVERY EMBODIMENT. THERE'S THE OLD VITRONICS LANGUAGE THAT SAYS A CONSTRUCTION THAT EXCLUDES A PREFERRED EMBODIMENT IS RARELY, IF EVER, CORRECT. LATER CASES SAY WELL, THAT DOESN'T REALLY APPLY UNLESS YOU'RE EXCLUDING EVERY EMBODIMENT IN THE SPECIFICATION. HERE IT IS INCLUDING THE FIRST TWO EMBODIMENTS, THE DMA CPU 72 AND THE DMA CPU 314. BUT IT'S EXCLUDING THE THIRD EMBODIMENT WHERE THE DMA CONTROLLER IS, THE DMA CONTROLLER HAS --

THE COURT: IS REPLACING A DMA CPU.

MR. WEINSTEIN: YES, EXACTLY.

THE COURT: AND I'M NOT SUGGESTING THAT THIS HAS HAPPENED IN THIS CASE, BECAUSE I JUST DON'T KNOW. BUT, YEAH, I CAN IMAGINE A SITUATION, RIGHT THROUGH AMENDMENT OR OTHER OTHERWISE, WHERE ORIGINALLY PERHAPS THERE WAS LANGUAGE WHICH WOULD REASONABLY INCLUDE EACH OF THE EMBODIMENTS AT ISSUE, BUT

FOR VARIOUS PURPOSES THE PATENTEE IS ABANDONING OR EXCLUDING ONE OR MORE SUCH EMBODIMENTS IN A FURTHER CLAIM.

MR. WEINSTEIN: YES, YOUR HONOR. AND AS THEY ARE, THEY ARE VERY EAGER TO POINT OUT EVERY TIME THEY CAN, THERE WAS A RESTRICTION REQUIREMENT THAT BROKE THIS PATENT UP INTO A NUMBER OF DIFFERENT APPLICATIONS. ALL OF THEM COVERING DIFFERENT ASPECTS OF THE CLAIMED SYSTEM.

IN FACT, IN SOME CASES, SOME OF THESE PATENTS COVER WHAT'S ESSENTIALLY JUST ON ONE OR TWO COLUMNS OF THE SPECIFICATION. AND SO THAT'S WHY YOU HAVE, YOU KNOW, A SINGLE SPECIFICATION THAT'S SUPPORTED, YOU KNOW, A RATHER LARGE NUMBER OF DIFFERENT PATENTS.

SO NOW TALKING ABOUT THIS RESTRICTION REQUIREMENT, THERE'S A COUPLE OF PROBLEMS WITH THEIR ARGUMENT. THE FIRST PROBLEM IS THAT YOU HAVE GROUP 3 WHICH WAS ABANDONED, AND YOU HAVE GROUP 8. AND AS MR. BAUM POINTED OUT, THE ORIGINAL LANGUAGE IN GROUP 8 IS A MICROPROCESSOR ARCHITECTURE.

ONE OF THE BOARDS WE HAVE HERE ACTUALLY SHOWS CLAIM 890. IT'S WHAT YOU MIGHT CALL A PICTURE CLAIM. IT HAS A TON OF ELEMENTS ON IT. IT GOES ON FOREVER.

AND, SO, THE PROBLEM WITH A RESTRICTION REQUIREMENT IS UNDER SECTION 121, ALL IT MEANS IS YOU HAVE DISTINCT AND INDEPENDENT INVENTIONS ACROSS THE DIFFERENT, IT DOESN'T MEAN YOU CAN'T SHARE CLAIM ELEMENTS OR REQUIREMENTS.

AND WE HAVE EXAMPLES IN OUR BRIEF WHERE, FOR

EXAMPLE, THE ARITHMETIC LOGIC UNIT HAS BEEN SHARED ACROSS MULTIPLE DIFFERENT PATENTS. THE PUSH DOWN STACK, AT LEAST, THERE'S AT LEAST TWO OR THREE PATENTS IN THIS GROUP THAT GO ACROSS IT, IN WHICH THE FIRST PUSH DOWN STACK IS RECITED.

INVENTION IS DEFINED BY ALL OF ITS CLAIM LIMITATIONS.

THE COURT: RIGHT. SO AS I UNDERSTOOD IT, THERE COULD BE A RESTRICTION, AND I MAY BE JUST MISREMEMBERING THE CASE LAW, BUT AS I UNDERSTOOD IT, YOU COULD, AN EXAMINER COULD IMPOSE A RESTRICTION REQUIREMENT SUCH THAT IF THERE WERE, I DON'T KNOW SAY, A DOZEN CLAIMED LIMITATIONS IN EACH OF THE RESTRICTED APPLICATIONS THAT FOLLOWED, ALL BUT ONE OF THEM COULD BE IDENTICAL OR OVERLAPPING AND STILL BE AN APPROPRIATE RESTRICTION.

MR. WEINSTEIN: ABSOLUTELY. AS LONG AS THE TOTALITY OF THE CLAIM STATES A DISTINCT AND INDEPENDENT INVENTION, SECTION 121 OF THE PATENT ACT IS SATISFIED.

SO WHAT YOU HAVE HAPPEN HERE IS THAT -- AND THE OTHER PROBLEM WITH THEIR ARGUMENT IS THAT THE GROUP 3 CLAIMS DIDN'T ACTUALLY RECITE A DMA CPU. THEY TALKED ABOUT A DMA PROCESSOR FOR FETCHING INSTRUCTIONS. THE TERM "DMA CPU" WAS NOT IN THE GROUP 3 CLAIM.

SO YOU CAN'T ERASE THE FACT THAT THE WORD "CPU" IS IN DMA CPU. IT WAS IN THE GROUP 8 CLAIMS, AND THOSE ARE THE CLAIMS THAT ULTIMATELY ISSUED.

AND WE CITED THE CASE LAW SAYING, BASICALLY, THAT THE RESTRICTION REQUIREMENTS GIVE VERY, VERY LITTLE WEIGHT. AND MOSTLY BECAUSE IT'S JUST AN ADMINISTRATIVE TOOL AT THE PATENT OFFICE TO ALLOW THE EXAMINER TO BREAK WHAT IS OTHERWISE A LARGE NUMBER OF CLAIMS IN DISTINCT AREAS INTO A NUMBER OF DIFFERENT APPLICATIONS. AND, BY THE WAY, SECURE THE DIFFERENT FILING FEES FOR EACH ONE, AND POSSIBLY EVEN ASSIGN A DIFFERENT -- IT'S A WORKLOAD RESTRICTION AND CONTROL SYSTEM.

NOW, THE SITUATION WHERE RESTRICTION REQUIREMENTS MIGHT HAVE SOME RELEVANCE IS WHERE THERE'S ACTUALLY A DISCUSSION OF THE CLAIM LIMITATION. AN EXAMPLE OF THAT IS THE CASE THAT THEY CITE, WHICH IS THIS RAMBUS VERSUS INFINEON CASE.

IT WAS ACTUALLY A RELATIVELY SIMPLE ISSUE IN THAT CASE, DOES THE TERM "BUS" IS THAT RESTRICTED TO A MULTIPLEX BUS OR IS IT NOT? AND THEY RELIED ON A LOT OF DIFFERENT THINGS.

BUT ONE OF THE THINGS THEY RELIED ON WAS THE FACT THAT THE RESTRICTION REQUIREMENT ACTUALLY SAID THAT THE CLAIMS IN GROUP 2, THE SET OF CLAIMS DOES NOT REQUIRE A MULTIPLEX BUS AS CLAIMED IN GROUP 1. THE RESTRICTION REQUIREMENT MADE A SPECIFIC OBSERVATION ABOUT THE EXACT CLAIM ELEMENT THAT WAS AT ISSUE, AND DRAW THE DISTINCTION AS THE BASIS FOR THE RESTRICTION.

WE HAVE NOTHING LIKE THAT HERE. THERE IS NO DISCUSSION OF A DMA CPU. THERE IS NO DISCUSSION SAYING WELL, GROUP 3 HAS FETCH AND EXECUTE INSTRUCTIONS, GROUP 8 DOESN'T.

GROUP 8 IS AN ARCHITECTURE CLAIM. IT IS DISTINCT BY THE FACT THAT IT COVERS A LOT OF DIFFERENT THINGS THAT'S NOT COVERED BY GROUP 3.

NO EXCEPTION OF STATEMENTS HERE OCCURRED ON THE DMA CPU.

THE COURT: SO ON THAT POINT, ARE YOU SAYING, MR. WEINSTEIN, THAT EVEN IF THERE WERE MULTIPLE BASES UPON WHICH THE RESTRICTION COULD HAVE BEEN MADE, IT'S CONCEIVABLE THERE WAS DISCUSSION, SPECIFIC DISCUSSION IDENTIFYING WHAT DISTINGUISHED ONE GROUP FROM THE OTHER. IN THAT SITUATION, ONE MIGHT BE ABLE TO RELY UPON THE RESTRICTION AS THEY DID IN RAMBUS, AND WE DON'T HAVE THAT HERE.

MR. WEINSTEIN: YES, IT WOULD BE MORE RELEVANT AS FAR AS INTRINSIC EVIDENCE, THAN JUST THE MERE FACT OF A RESTRICTION REQUIREMENT.

BECAUSE IN THIS CASE, THERE IS NO BASIS FOR US TO GO BACK AND INFER THAT THE REASON FOR THE DISTINCTION BETWEEN GROUP 3 AND GROUP 8 WAS THE EXISTENCE OF THE DMA PROCESSOR AND THE DMA FETCHING.

IN THE RAMBUS CASE, THE EXAMINER ACTUALLY SAID THAT, THE DIFFERENCE BETWEEN THESE TWO CLAIMS IS THAT A MULTIPLEX BUS IS RECITED AND REQUIRED BY GROUP 2 CLAIMS, BUT NOT IN GROUP 1. SO YOUR HONOR IS CORRECT.

AND THE LAST ARGUMENT HERE IS THIS RE-EXAMINATION ARGUMENT. AND THIS IS A CURIOUS ONE FOR A LOT OF DIFFERENT

REASONS. THE FIRST PART ABOUT THIS IS, WHAT'S INTERESTING ABOUT THIS IS THAT THIS ISN'T THE STATEMENT OF AN ANONYMOUS THIRD PARTY. AND IT WASN'T, IT WAS THE FISH AND RICHARDSON LAW FIRM; MR. GARDELLO FILED THIS.

AND, BASICALLY, WHEN YOU LOOK AT THE RE-EXAMINATION REQUEST ITSELF, AND YOU PUT THE RELEVANT PAGES IN THE RECORD, IT LOOKS LIKE HE WAS ACTUALLY MOTIVATED BY THE PLAINTIFFS' INFRINGEMENT ALLEGATIONS. HE ACTUALLY REFERENCED THE CLAIM CHARTS THAT HAD BEEN RECEIVED FROM TPL. AND ACTUALLY ASKED THE PTO TO GO REQUEST THOSE FROM TPL, AND USE THEM AS ADMISSIONS ON THE SCOPE OF THE CLAIM.

SO WHAT THE ANONYMOUS THIRD PARTY THOUGHT OF THE CLAIM LIMITATIONS, EVEN IF THAT WAS RELEVANT TO CLAIM CONSTRUCTION, IT WAS OBVIOUSLY BEING BIASED BY THE FACT THAT THEY WERE TRYING TO MAP THE CLAIM ELEMENTS TO THE WAY IT WAS BEING ASSERTED BY TPL AGAINST MR. GARDELLO'S CLIENT. AS WELL AS THE PEOPLE ON THE PLAINTIFFS' SIDE HERE.

THE COURT: WELL, THAT'S WHAT MOST THIRD-PARTY REQUESTERS TRY TO DO, RIGHT?

MR. WEINSTEIN: EXACTLY, YOUR HONOR. AND PART OF THE REASON WHY, THE LAST POINT HERE IS, THERE IS A DIFFERENT STANDARD IN CLAIM CONSTRUCTION. WHICH IS WE DON'T USE MARKMAN PRINCIPLES STRICTLY WHEN DOING RE-EXAMINATION, WE USE THE BROADEST REASONABLE CONSTRUCTION OF THE CLAIM. AND THE IDEA IS BECAUSE IF YOU HAVE TWO POSSIBLE CONSTRUCTIONS YOU TAKE THE

BROADER ONE BECAUSE THE PATENTEE CAN NARROW ITS CLAIMS, THEY CAN DO VARIOUS THINGS IN RE-EXAMINATION.

AND SO EVEN IF YOU CAN SAY THAT THE EXAMINER'S BLANKET INCORPORATION OF THE FISH AND RICHARDSON POSITION WAS SOMEHOW PROBATIVE OF WHAT HIS OPINION WAS, HE'S APPLYING AN ENTIRELY DIFFERENT CLAIM CONSTRUCTION STANDARD THAT IS NOT GEARED TOWARD GETTING THE CORRECT CONSTRUCTION, BUT GEARED TOWARD GETTING THE BROADEST CONSTRUCTION THAT IS REASONABLE.

THE COURT: DOESN'T THAT CREATE SOME PROBLEMS FOR YOUR EARLIER ARGUMENTS?

WHEN I WAS LOOKING AT WHAT THE EXAMINER THOUGHT ABOUT CERTAIN DISTINCTIONS OVER THE PRIOR ART, WHEN WE WERE TALKING ABOUT SOME OF THE EARLIER LIMITATIONS, IN OTHER WORDS, ISN'T THIS, I AGREE YOU'VE RECITED IN RE SWANSON CORRECTLY, AND CERTAINLY THE BROADEST REASONABLE CONSTRUCTION PRINCIPLE APPLIES IN THE PTO IN A WAY IT DOESN'T APPLY HERE, BUT I'M STRUGGLING, WHAT IS UNIQUE ABOUT A RE-EXAMINATION OR ABOUT THIS CONTEXT FROM EVERY OTHER SITUATION WHERE I'VE GOT TO LOOK TO WHAT WAS HAPPENING AT THE PTO AND FIGURE WHAT THAT TEACHES THE BROADER PUBLIC ABOUT THE SCOPE?

MR. WEINSTEIN: I THINK THE MAIN DIFFERENCE HERE IS THAT IN MOST OF THE SITUATIONS WHERE WE'RE CONSTRUING THE FILE HISTORY, WE'RE CONSTRUING A DIALOG BETWEEN THE PATENT OWNER AND THE EXAMINER. AND HERE, IT WAS JUST AN ANONYMOUS THIRD PARTY MAKING A STATEMENT. TPL NEVER COMMENTED AT ALL ON THE DMA CPU.

THEY DIDN'T EVEN TOUCH IT.

AND THE OBVIOUS REASON WAS BECAUSE THEY WANTED TO MAINTAIN THE POSITION THAT THEY'RE TAKING HERE. SO THERE WAS NO ACTIVE DIALOG HERE. AND THAT'S WHAT DISTINGUISHES THIS SITUATION FROM, SAY, SOME OF THE OTHER EXAMPLES OF FILE HISTORY ESTOPPEL IN THE DISCLAIMER.

THE COURT: YOU MAY BE RIGHT. IT JUST SEEMS TO ME, YOU RAISE AN INTERESTING QUESTION. BUT ULTIMATELY WHAT I'M TRYING TO FIGURE OUT, AND WHAT I NEED TO FIGURE OUT HERE IS HOW ONE OF ORDINARY SKILL IN THE ART, THE PHOSITA -- TO USE MR. BAUM'S PRONUNCIATION -- HOW THE PHOSITA WOULD LOOK AT THIS RECORD, RIGHT, AND INTERPRET EITHER THE DIALOG BETWEEN THE EXAMINER AND THE APPLICANT. OR I THINK IN THE CASE OF RE-EXAM, I'M ALLOWED TO LOOK AT THE RE-EXAMINATION HISTORY AS WELL, RIGHT?

MR. WEINSTEIN: ABSOLUTELY.

THE COURT: OKAY. THE QUESTION IS HOW TO PROPERLY INTERPRET THAT DIALOG. AND MAYBE YOU'RE RIGHT, THAT A DIALOG BETWEEN A THIRD PARTY AND THE EXAMINER HAS A DIFFERENT EFFECT, OR OUGHT TO BE AT LEAST CONSIDERED DIFFERENTLY THAN A DIALOG BETWEEN THE APPLICANT AND EXAMINER.

MR. WEINSTEIN: I THINK THAT'S TRUE. AND PARTIALLY BECAUSE THE APPLICANT HAS NO POWER TO MAKE ANY SORT OF CHANGES TO THE SCOPE ITSELF. AND THE EXAMINER'S STATEMENTS ARE BASICALLY, IN THIS CASE, UNILATERAL. SO HE WASN'T DOING IT --

THE COURT: WELL, I SHOULDN'T, THE APPLICANT, I WOULD THINK, HAS A CONTROL THAT THE THIRD PARTY --

MR. WEINSTEIN: OH, I MEANT THE THIRD PARTY REQUESTER, APPLICANT, RIGHT. THE REQUESTER IS WHAT I MEANT.

THE COURT: YEAH.

MR. WEINSTEIN: SO I THINK JUST FOR A LOT OF REASONS. BECAUSE OF THE FACT THAT WE'RE TALKING ABOUT AN ANONYMOUS THIRD PARTY; WE'RE TALKING ABOUT POSITIONS THAT WERE NEVER ADDRESSED BY TPL; WE'RE TALKING ABOUT A DIFFERENT CLAIM CONSTRUCTION POSITION, AND WE DON'T EVEN KNOW WHAT MOTIVATED FISH AND RICHARDSON TO DO THAT; I THINK FOR ALL THOSE REASONS THE PROBATIVE VALUE OF THE RE-EXAM JUST BECOMES ALMOST ZERO FOR PURPOSES OF INTRINSIC EVIDENCE.

I THINK THAT'S ALL I HAVE FOR THIS TERM, YOUR HONOR.

THE COURT: THANK YOU VERY MUCH.

MR. WEINSTEIN: THANK YOU.

THE COURT: MR. BAUM, ANY REBUTTAL?

MR. BAUM: JUST VERY QUICKLY.

I THINK THE ISSUE HAS BEEN VISITED FAIRLY. I THINK YOUR HONOR UNDERSTANDS IT. THE ONE, A COUPLE OF POINTS THAT I MEANT TO MAKE AND I DIDN'T INITIALLY IS THAT THE REASON WHY THERE'S A FIGURE 9 EMBODIMENT IS, RELATES TO A PATENT THAT'S NOT BEING CONSTRUED HERE TODAY.

SO THAT MIGHT -- THERE IS A DIFFERENT EMBODIMENT,

AND FIGURE 9, THEY'RE ACTUALLY SAVING PROCESSOR SPACE BECAUSE THEY'RE FILLING IT UP WITH MEMORY. SO ACTUALLY, IF YOU BRING THE MEMORY ON-CHIP, AS WELL AS THE CLOCK, YOU CAN HAVE SOME ENHANCEMENTS AS WELL. AND THAT'S THE '148 PATENT. WE'RE JUST NOT TALKING ABOUT IT HERE, BUT THAT'S WHY THERE'S THIS DIFFERENT CONFIGURATION.

THE OTHER THING THAT I WOULD POINT OUT IS I THINK WHAT WE HAVE HERE IS BASICALLY A DISPUTE BETWEEN PEOPLE WHO AREN'T ONES OF SKILL IN THE ART; WE'RE THE LITIGATORS AND SOMETIMES THE COURT. AND SO, JUDGE WARE DID WHAT I WOULD DO, WHICH IS I'D GO LOOK UP WHAT IS DMA? I'D LOOK THAT UP. AND I'D LOOK UP WHAT IS CPU? AND THEN I'D PROBABLY TRY AND PEN THOSE TOGETHER.

AND SOMETIMES THAT CAN LEAD TO THE RIGHT RESULT. BUT SOMETIMES THERE ARE TERMS OF ART THAT EVERYONE WHO WORKS IN THE ART KNOWS, NO, YOU DON'T DO THAT, YOU DON'T ADD THESE TWO THINGS TOGETHER. AND THERE ARE FEDERAL CIRCUIT CASES THAT WE CITE IN OUR BRIEF WHERE COURTS HAVE MADE THAT MISTAKE BY GOING TOO MICRO, TOO GRANULAR, AND LOOKING AT EACH WORD RATHER THAN THE OVERALL PHRASE AS IT'S USED IN CONTEXT. THEY WERE LED ASTRAY. AND WE THINK THAT'S THE CASE HERE.

THE COURT: THANK YOU VERY MUCH.

WHY DON'T WE CONTINUE. "MULTIPLE SEQUENTIAL INSTRUCTIONS" IS THAT THE NEXT TERM?

MR. WEINSTEIN: YES, YOUR HONOR.

THE COURT: IF YOU CAN JUST GIVE ME ONE MINUTE, MR. WEINSTEIN. LET ME MAKE A NOTE.

ALL RIGHT. YOU MAY PROCEED.

MR. WEINSTEIN: THANK YOU, YOUR HONOR.

THIS WAS OUR MOTION FOR RECONSIDERATION ON THE SUPPLY TERM. THE FIRST POINT I WANT TO EMPHASIZE, YOUR HONOR, IS THE FIRST WORD OF THIS TERM IS THE WORD "SUPPLY." I KNOW THERE WAS A DISCUSSION EARLIER ABOUT WELL, WHEN YOU EXECUTE INSTRUCTIONS, AREN'T YOU DOING IT ONE-BY-ONE? AND THERE WAS A COLLOQUY ABOUT THAT.

THE ORDER OF EXECUTION OF THE INSTRUCTIONS IS NOT ACTUALLY RELEVANT TO THIS PARTICULAR CONSTRUCTION. WHAT THIS CONSTRUCTION TALKS ABOUT IS SUPPLYING THEM TO THE CPU, NOT NECESSARILY HOW THEY ARE ACTUALLY EXECUTED. LATER ASPECTS OF THE PATENT WILL ACTUALLY DEAL WITH THE ACTUAL EXECUTION OF IT.

SO THE MAIN DISTINCTION AND, YOU KNOW, DURING THE CLAIM CONSTRUCTION PROCESSES, AS YOU'VE SEEN, THE PARTIES GET AS CLOSE TO EACH OTHER AS THEY CAN AS FAR AS TO TRY TO DISTILL THE DISPUTES AS MUCH AS POSSIBLE. AND IN THIS CASE THERE REALLY WAS ONLY ONE DISPUTE, WHICH WAS DOES THIS PHRASE EXCLUDE A SYSTEM IN WHICH INSTRUCTIONS ARE SUPPLIED ONE-BY-ONE TO THE INSTRUCTION REGISTER -- I'M SORRY, TO THE CPU.

WHAT HAPPENS IN THE '749 PATENT IS YOU CAN FETCH MULTIPLE INSTRUCTIONS IN AN INDIVIDUAL MEMORY CYCLE. WHAT CAN HAPPEN AT THAT POINT IS THAT IN THE PRIOR ART SYSTEM THEY'RE

DELIVERED TO THE CPU ONE AT A TIME. SO THEY GO SEQUENTIALLY FROM, INTO THE CPU ONE AT A TIME. AND WE'LL TALK ABOUT TO A "PREFETCH BUFFER" OR "ONE-INSTRUCTION-WIDE BUFFER" ARE EXAMPLES OF THAT.

NOW, WHAT THE '749 TALKS ABOUT IS, LET'S SEE IF WE CAN SUPPLY ALL THE INSTRUCTIONS IN PARALLEL AND NOT ONE-BY-ONE TO THE CPU.

THE MAIN DISTINCTION, THE MAIN REASON WE MOVE FOR RE-CONSIDERATION IS THAT WE THINK THAT JUDGE WARE ACTUALLY GOT THE DISPUTE A LITTLE BIT WRONG. HE LOOKED AT THE DISPUTE AS TO WHETHER OR NOT THE TERM REQUIRED THE PRESENCE OF A PREFETCH BUFFER. AND, ULTIMATELY, WHETHER THERE'S A PREFETCH BUFFER OR NOT REALLY WASN'T THE MAIN ISSUE.

THE MAIN ISSUE WAS, FROM AN OPERATIONAL STANDPOINT, WHEN YOU SUPPLY MULTIPLE INSTRUCTIONS, AS RECITED IN THIS CLAIM ELEMENT, CAN YOU SATISFY THAT BY DOING IT ONE-BY-ONE?

THE ACTUAL PHYSICAL STRUCTURE BEING USED WASN'T RELEVANT. LIKE HOW YOU, HOW DO YOU MAKE IT SO IT GOES ONE-BY-ONE, WHAT ARE YOU EXCLUDING; THAT WASN'T AS RELEVANT AS THE FACT THAT YOU CAN'T GO ONE-BY-ONE INTO THE CPU.

MR. OTTESON TALKED EARLIER TODAY ABOUT CLEAR AND UNMISTAKABLE DISCLAIMERS IN THE PROSECUTION HISTORY. AND I SUBMIT THIS IS PROBABLY ONE OF THE CLEAREST THAT YOU'RE GOING TO FIND. THIS IS IN THE RE-EXAMINATION FILE HISTORY, WHERE THE APPLICANT IS DISTINGUISHING THE EDWARDS REFERENCE, AND MAKING

THE FOLLOWING STATEMENT, "FETCHING MULTIPLE INSTRUCTIONS INTO A PREFETCH BUFFER AND THEN SUPPLYING THEM ONE AT A TIME IS NOT SUFFICIENT TO MEET THE CLAIM LIMITATION." AND THEN HE RECITES THE CLAIM LIMITATION AT ISSUE HERE.

IT'S HARD TO IMAGINE A MORE CLEAR AND UNEQUIVOCAL DISCLAIMER, WHERE IN ONE SENTENCE THE APPLICANT IS DESCRIBING AN ACTUAL PARTICULAR OPERATIONAL CHARACTERISTIC AND TYING IT DIRECTLY TO THE CLAIM LANGUAGE. THERE'S NO AMBIGUITY HERE AS TO WHAT'S BEING DISCLAIMED. THERE'S NO AMBIGUITY. THEY CAN'T ARGUE THEY'RE TALKING ABOUT SOME OTHER PART OF THE CLAIM LANGUAGE. THEY'RE TYING IT DIRECTLY TO THE TERM AT ISSUE HERE.

THIS ARGUMENT WAS MADE OVER AND OVER DURING THE RE-EXAMINATION FILE HISTORY. TEN MONTHS LATER, DURING THE SAME RE-EXAMINATION FILE HISTORY, THE SAME ARGUMENT WAS MADE. "AS DISCUSSED IN THE INTERVIEW, AND ELABORATED ON ABOVE WITH RESPECT TO THE MAY/EDWARDS REJECTIONS, THE DURING A SINGLE MEMORY LIMITATION IS NOT SATISFIED BY SUPPLYING ONE INSTRUCTION TO THE CPU AT A TIME."

AND GOING BACK, THEY MADE THE SAME ARGUMENT WITH RESPECT TO MACGREGOR, "MACGREGOR MIGHT IMPLY THAT IT FETCHES TWO INSTRUCTIONS FROM MEMORY AT A TIME, BUT THE INSTRUCTIONS ARE SUPPLIED TO THE CPU ONE AT A TIME. SUCH NON-PARALLEL SUPPLYING OF INSTRUCTIONS TO THE CPU IS NOT SUPPLYING THEM TO THE CPU DURING A SINGLE MEMORY CYCLE AS REQUIRED BY THE CLAIM."

AND THAT LAST CLAUSE, "AS REQUIRED BY THE CLAIM"

HE'S TYING THIS SPECIFICALLY TO THE DISPUTED CLAIM LANGUAGE WE'RE TALKING ABOUT HERE.

IN FACT, WHEN WE ORIGINALLY, WHEN WE FILED A REPLY IN RESPONSE TO TPL'S BRIEF, WE WERE ACTUALLY SURPRISED THERE WAS EVEN A DISPUTE ABOUT THIS. BECAUSE HERE'S TPL'S RESPONSIVE BRIEF, WHERE THEY'RE CHARACTERIZING THE STATEMENTS THAT WERE MADE DURING THE RE-EXAMINATION. AND THEY'RE ACTUALLY ADMITTING "EACH STATEMENT EXPRESSLY DISTINGUISHES THE PRIOR ART REFERENCE ON THE SAME BASIS, THE INSTRUCTIONS ARE SUPPLIED TO THE CPU ONE AT A TIME." AND SO THEY HAVE A, B AND C HERE IN THEIR BRIEF ACTUALLY BASICALLY AGREEING WITH US.

THAT WAS THE BASIS ON WHICH THE PRIOR ART WAS DISTINGUISHED. THAT SHOULD BE INCORPORATED INTO THE CONSTRUCTION OF THIS TERM.

TPL MAKES THIS ARGUMENT AGAIN IN THEIR BRIEF THAT WELL, A INSTRUCTION -- A PREFETCH BUFFER OR A ONE-INSTRUCTION-WIDE BUFFER ARE NOT REQUIRED BY THE CLAIM LIMITATION. AND THAT'S, AGAIN, AS WE SAID IN OUR BRIEF, I WON'T GO OVER IT TOO MUCH, THAT'S NOT THE POINT. THE POINT IS THAT YOU CAN'T USE THOSE STRUCTURES WHEN YOU'RE SUPPLYING THEM ONE AT A TIME.

IF YOU HAVE A SYSTEM WITH JUST A PREFETCH BUFFER, THAT MAY OR MAY NOT HAVE ANYTHING TO DO WITH OUR CONSTRUCTION. AS LONG AS IT'S NOT BEING USED TO SUPPLY INSTRUCTIONS ONE AT A TIME TO THE CPU.

THE COURT: SO ARE THERE SCENARIOS WHERE YOU WOULD HAVE A PREFETCH BUFFER AND YOU WOULD BE SUPPLYING, NEVERTHELESS SUPPLYING THE INSTRUCTIONS ONE AT A TIME?

MR: WEINSTEIN: THAT'S PARTIALLY WHAT, THAT'S WHAT A LOT OF LIKE -- I DON'T WANT TO GET TOO MUCH INTO INFRINGEMENT -- BUT THAT'S ACTUALLY WHAT THEY'VE ACCUSED, IS A PREFETCH BUFFER THAT FETCHES MULTIPLE INSTRUCTIONS BUT THEN FEEDS THEM DOWN INTO THE CPU ONE AT A TIME. AND THAT'S WHAT WE'RE ARGUING WAS EXCLUDED.

SO THE LAST ARGUMENT, ONE OF THE ARGUMENTS THEY MAKE IS WELL, WE ADDED ALL THIS LANGUAGE DURING THE RE-EXAMINATION FILE HISTORY. AND THIS LANGUAGE USES, YOU KNOW, ACTUALLY DEFINES WHAT THE TERM IS. THAT'S THE ARGUMENT THEY MAKE.

THAT WE ACTUALLY TOLD THE EXAMINER WHAT THE SUPPLY TERM MEANS WHEN WE SAID, IN THE LAST CLAUSE, "SUPPLY THE MULTIPLE SEQUENTIAL INSTRUCTIONS TO THE CPU DURING A SINGLE MEMORY CYCLE COMPRISES," AND THEN ALL THAT LANGUAGE AFTER THAT, THAT'S THEIR CONSTRUCTION OF THIS TERM. AND SO THEY'RE SAYING WELL, THAT SHOULD BE THE DEFINITION OF THE SUPPLY TERM BECAUSE THAT'S ACTUALLY RIGHT IN THE CLAIM LANGUAGE.

WELL, THERE'S A LOT OF PROBLEMS WITH THIS ARGUMENT, AND WE'VE IDENTIFIED THEM IN OUR BRIEF. I MEAN, FIRST OF ALL, THIS IS SUPPLYING, THE COMPRISES CLAUSE IS TALKING ABOUT SUPPLYING THE INSTRUCTIONS TO THE INSTRUCTION REGISTER, NOT TO

THE CPU. IT'S ALSO A COMPRISES CLAIM, IT'S JUST DESCRIBING WHAT'S REALLY A SUBSTEP.

AND THE THIRD PROBLEM WITH THE ARGUMENT IS, ALL THE DISCLAIMERS WE TALKED ABOUT WITH MAY -- I'M SORRY, WITH EDWARDS AND MACGREGOR, THEY DIDN'T ACTUALLY TAKE BACK ANY OF THESE, JUST LIKE WE SAW EARLIER WITH THE TALBOT REFERENCE, THEY NEVER CAME BACK AND SAID OH, WE DIDN'T MEAN THIS. WE DIDN'T MEAN TO SAY ONE AT A TIME.

SO THOSE DISCLAIMERS ARE STILL IN THE RECORD AND THEY HAVEN'T BEEN RESCINDED.

I THINK THAT'S ALL I HAVE, JUDGE. THANK YOU.

THE COURT: ALL RIGHT. THANK YOU VERY MUCH.

RESPONSE, MR. BAUM?

MR. BAUM: LET ME MAKE SURE MY SLIDES WORK.

WE HAVE A RESPONSE, YOUR HONOR.

BUT, FUNDAMENTALLY, I'M ACTUALLY KIND OF, THIS IS THE FIRST I'VE HEARD, THIS PARTICULAR SCENARIO, ALTHOUGH IT WAS HINTED AT IN THE PAPERS.

YEAH, WE -- OUR INITIAL SLIDES ARE ABOUT THE SAME.

LET ME SEE IF I CAN RUN THIS. SO WE'VE ALREADY SEEN THIS SLIDE. AND YOU REMEMBER THE ANIMATION. AND I DON'T -- APPARENTLY, THIS IS CONTROVERSIAL.

WE SAY WHAT YOU DO IS YOU FETCH MULTIPLE INSTRUCTIONS FROM OFF-CHIP AND YOU PUT THEM ON-CHIP INTO THE INSTRUCTION REGISTER.

WHAT THEY ARE APPARENTLY SAYING -- WOULD YOU MIND PULLING UP YOUR SLIDE 73, IT'S THE ANIMATION. CAN YOU RUN IT?

PULLING IT IN. RIGHT.

AND THEN -- OH. THEY'RE SAYING THEY ALL, YOU'RE SENDING FOUR INSTRUCTIONS INTO, BASICALLY, THE PIPELINE, OR THE ALU, SIMULTANEOUSLY.

NOW, IF CHUCK MOORE INVENTED AN ALU OR A PROCESSER THAT COULD ACTUALLY PROCESS FOUR CONSTRUCTIONS SIMULTANEOUSLY, HE SHOULD HAVE WON THE NOBEL PRIZE IN PHYSICS, BECAUSE THAT HASN'T BEEN DONE YET.

WHAT THIS PATENT IS ABOUT IS THAT YOU PULL MULTIPLE INSTRUCTIONS FROM OFF-CHIP ONTO THE CHIP, AND THE CPU IS BEING REFERRED TO AS THE DIE, AND THEN YOU FEED -- BUT YOU'RE NOT WAITING FOR THE I/O, THE INPUT-OUTPUT FROM OFF-CHIP MEMORY, NOW THEY'RE THERE. THEY'RE READY TO BE USED AND YOU CAN DISTRIBUTE THEM TO THE PIPELINE OF THE CPU AS FAST AS THE CPU CAN HANDLE THEM. YOU CAN HAVE THIS FASTER SPEED.

IT'S NOT SAYING YOU PUT MULTIPLE INSTRUCTIONS SIMULTANEOUSLY DOWN THE PIPELINE FOR AN ALU TO ACTUALLY, YOU KNOW, ADD ONE, AND SHIFT ON THE OTHER SIMULTANEOUSLY. NOBODY HAS DONE THAT. THAT'S WHY WE HAVE MULTICORE PROCESSORS.

WE DON'T HAVE -- AND SO WHAT THEY'RE DOING IS THEY'RE CALLING THE CPU, HERE. WHAT THEY REALLY MEAN IS THE ALU. AND, THAT'S NOT WHAT THIS PATENT IS ABOUT. AND THAT WOULD BE WRONG.

WHAT'S REFERRED TO IN THE CLAIM IS SIMPLY THE CENTRAL PROCESSING UNIT. I THINK THE CLAIM IS QUITE CLEAR ON THIS.

CAN WE SWITCH BACK TO OUR SLIDES. THANK YOU.

SO ONCE IT'S ON BOARD, IN THE CHIP, THEN THEY'RE GOING TO GO DOWN INTO THE PIPELINE AS USUAL. AS THE PROCESSORS WORK.

THE COURT: SO, ON THAT POINT, LET ME JUST GO BACK TO THAT SLIDE, YOU'RE ESSENTIALLY SAYING THAT THE MULTIPLE INSTRUCTIONS WHICH ARE REFLECTED IN THE FOUR COLORS THERE ARE SIMPLY BEING BROUGHT OFF-CHIP HERE FROM A MEMORY CONTROLLER ON-CHIP, AND AS LONG AS THAT'S HAPPENING IN PARALLEL, YOU'VE SATISFIED THE LIMITATION, IT'S NOT THAT THEY ARE THEN BEING SUPPLIED.

MR. BAUM: RIGHT.

THE COURT: AM I BASICALLY FOLLOWING?

MR. BAUM: THE SUPPLY IS FROM OFF-CHIP MEMORY ONTO THE CHIP.

THE COURT: IT'S NOT PROCESSING?

MR. BAUM: YEAH, YOU COULD -- YOU CAN'T. I MEAN, IT WOULD BE CONSTRUING THE CLAIM IN A WAY THAT WOULD RENDER IT INOPERABLE.

SO, AND I THINK WHAT TO REMEMBER HERE, AND I DID ANTICIPATE IT, BUT I HADN'T SEEN THEM ACTUALLY DEMONSTRATE IT BEFORE. FIRST OF ALL, THIS IS A 112, AS WE KNOW NOW A 112(F)

LIMITATION, AFTER THE AIA.

SO THESE ARE MEANS, WHAT WE'RE DEFINING -- WE KNOW WHAT THE MEANS FOR FETCHING ARE. IT'S ACTUALLY JUST A BUS. WE FETCH FROM OFF-CHIP OVER A BUS. AND THE FUNCTION IS FETCHING MULTIPLE INSTRUCTIONS IN A SINGLE MEMORY CYCLE AND SUPPLYING THEM TO THE CPU INTEGRATED CIRCUIT, NOT THE ALU OR SOMETHING DEEP DOWN IN THE PIPELINE.

WE HAVE THESE MULTI STAGE PIPELINES NOW, AND THEY HAVE FETCH, DECODE, ET CETERA. IT'S NOT --

THE COURT: IS IT, AM I RIGHT IN UNDERSTANDING, MR. BAUM, THAT THE ALU IS PART OF THE CPU INTEGRATED CIRCUIT?

MR. BAUM: YES. OH, YEAH. THAT'S THE ACTUAL ONE THAT DOES THE REAL WORK, I GUESS YOU COULD SAY.

THE COURT: YEAH. THAT'S WHERE THE LOGIC HAPPENS.

MR. BAUM: YES. ADD, SHIFT. THAT'S ABOUT ALL I KNOW.

SO ALL OF THESE ARGUMENTS WERE IN FRONT OF JUDGE WARE. YOU KNOW, WE ARE CALLING THESE MOTIONS FOR RECONSIDERATION. AT LEAST, YOU KNOW, WE BROUGHT UP THE FACT, AND WE APOLOGIZED, AND SAID GEEZ, WE'VE NEVER SEEN A PATENT THAT HAD THIS 30,000 PLUS PAGE FILE HISTORY. AND WE MISSED THE RESTRICTION REQUIREMENT BACK IN '92.

THIS ISSUE IS SOMEWHAT OF A REHASH. IT IS ACTUALLY A PURE REHASH. AND SO IT WAS COMPLETELY DEALT WITH NOT ONLY AS PART OF THE CLAIM CONSTRUCTION BRIEFING, BUT ALSO THE

PLAINTIFFS HAD FILED A MOTION FOR SUMMARY JUDGMENT BECAUSE THEIR OVERALL ARGUMENT IS KIND OF THIS HYBRID OF, IF YOU CONSTRUE IT THIS WAY THEN WE DON'T INFRINGE BASED ON THE WAY DEFENDANTS ARE CONSTRUING THE CLAIM.

I DO BELIEVE THAT THE FEDERAL CIRCUIT HAS SAID IT'S NO LONGER IMPROPER TO CONSIDER INFRINGEMENT DURING CLAIM CONSTRUCTION. BUT I DON'T THINK WE'VE GOTTEN TO THE POINT WHERE IF WE DO IT TOO MUCH, PRETTY SOON WE'RE NOT REALLY DOING THE MARKMAN WHERE YOU CONSTRUE THE CLAIMS IN LIGHT OF SPECIFICATION FILE HISTORY. AND NOW WE'RE LOOKING AT WELL, WHAT IS THE PATENTEE CLAIMING THE CLAIM MEANS? AND COULD I DECIDE THAT -- WE REALLY HAVE TO PROCEED SERIALLY IN THAT REGARD.

THEY SAY WE'VE MADE A DISCLAIMER WITH RESPECT TO WHAT WAS ANOTHER PROCESSOR, KIND OF AN INTERESTING PROCESSOR FROM THE PAST, CALLED A TRANSPUTER, REFERENCES WHERE EDWARDS AND MAY HAD SOME PATENTS, AND THESE PATENTS WERE DIFFERENT. THEY WEREN'T INVOLVING THIS ISSUE OF CONSTRUING THE QUESTION OF SUPPLYING MULTIPLE INSTRUCTIONS.

WHAT THEY WERE DOING IS SAYING HEY, YOU COULD HAVE MULTIPLE THREADS GOING ON INSIDE, ON A CHIP, AND WE COULD ACTUALLY ACT AS A MAITRE-D, OR SOMETHING, AND SAY HEY, LET'S GO WITH THAT THREAD, IT'S MORE IMPORTANT. AND SWITCH OVER TO THAT ONE, AND SWITCH OVER TO THIS ONE. SO IT'S KIND OF SWITCHING AS BETWEEN THREADS OR ALTERNATIVE CHANNELS AS THEY WERE GOING ON.

IT HAD NOTHING TO DO WITH THE IDEA OF FETCHING INSTRUCTIONS AND SUPPLYING THEM TO THE CPU. IT WAS SWITCHING.

THESE CLAIMS -- THIS IS ACTUALLY, YOU KNOW, IN SOME SENSE, OF COURSE THERE'S NO SUCH THING, BUT IN A PATENT CASE THIS IS KIND OF A NO-BRAINER IN THAT THE '749 WAS RE-EXAMINED, IT'S A MEANS PLUS FUNCTION CLAIM. AND IN THE RE-EXAM CLAIM, AND IT'S A HUGE CLAIM, I'LL CONCEDE THAT IT TAKES UP, YOU KNOW, ALMOST AN ENTIRE COLUMN, WHAT WE DID TO OVERCOME THE EXAMINER'S CONCERNS IS WE SAID FINE, WE'LL SPELL OUT EXACTLY WHAT WE MEAN, RIGHT THERE IN THE CLAIM. SO THERE'S REALLY NO AMBIGUITY.

WE'VE ALL SEEN PATENT CLAIMS WHERE THINGS ARE AMBIGUOUS. THE ONLY AMBIGUITY HERE IS IT'S SO PRECISE. IT REALLY LAYS OUT EVERYTHING. SO IF WE'RE CONSTRUING "SUPPLY THE MULTIPLE SEQUENTIAL INSTRUCTIONS," IT SAYS WHEREIN, WE'VE ADDED THAT, WHEREIN THE BLAH BLAH, THE MEANS FOR FETCHING, THAT SUPPLY THE MULTIPLE SEQUENTIAL INSTRUCTIONS COMPRISES, SO WE'RE GOING TO SAY EXACTLY WHAT WE'RE DOING, SUPPLYING THE MULTIPLE SEQUENTIAL INSTRUCTIONS IN PARALLEL TO THE INSTRUCTION REGISTER DURING THE SAME MEMORY CYCLE.

SO THE CLAIM ITSELF DOES A FINE JOB OF ACTUALLY PROVIDING A CLAIM CONSTRUCTION. ANYTHING MORE WOULD BE SIMPLY ACTING AS A THESAURUS, OR, YOU KNOW, OBLIGATORY EXERCISE IN REDUNDANCY. JUDGE WARE WAS RIGHT. THIS DOES NOT NEED TO BE CONSTRUED.

NOW, HERE'S WHERE THE MOTION FOR SUMMARY JUDGMENT

CAME IN, AND WHAT PLAINTIFFS ARE ARGUING, THEY'RE SAYING WELL GEE, THE TPL OR THE MMP PORTFOLIO IS SAYING THAT WHEN WE USE SMALLER INSTRUCTIONS, TWO, TWO 16-BIT THUMB INSTRUCTIONS, SO WE'RE SENDING TWO INSTRUCTIONS ACROSS THE WIRE, THE PIECE OF EVIDENCE THAT YOU RELIED ON TO SUPPORT THAT INFRINGEMENT THEORY ALSO HAS THIS OTHER LINE IN IT THAT SAYS, WELL WHEN YOU DO THAT IT AFFECTIVELY, ONCE IT'S IN THE CPU, ACTS AS A ONE INSTRUCTION PREFETCH BUFFER BECAUSE, OF COURSE, IT SENDS ONE INSTRUCTION AT A TIME DOWN THE PIPELINE.

SO YOU HAVE TWO, TWO HAVE COME INTO THE INSTRUCTION REGISTER. NOW YOU'RE GOING TO SEND THEM ONE AT A TIME DOWN THE PIPELINE.

THE COURT: BY NECESSITY OR BY DEFINITION THAT MEANS THERE'S SOME KIND OF BUFFERING HAPPENING?

MR. BAUM: YES. IT'S A LATCH. A 16-BIT LATCH, ONE OF THE MOST SIMPLE THINGS YOU CAN HAVE; HOLD ONE, SEND THE OTHER; THEN NEXT, SEND THE NEXT. VERY SIMPLE.

THIS IS ALL POST FETCH TO THE INSTRUCTION REGISTER. SO WHAT THEY'RE DOING, AND WE DIDN'T RELY ON IT IN OUR INFRINGEMENT CONTENTION, BUT IT IS INCLUDED IN THE LANGUAGE, IS JUST SAYS SWITCHES EFFECTIVELY, IT'S SAYING SO YOU CAN UNDERSTAND IT.

THEIR MOTION FOR RECONSIDERATION KIND OF GRABS ONTO THAT AND SAYS WELL, GEE, THAT MECHANISM, WHICH SUPPLIES ONLY ONE OF THE TWO THUMB INSTRUCTIONS TO THE CPU, QUOTE, PIPELINE,

SO SUDDENLY THEY'RE RECOGNIZING WELL, THIS IS NOT REALLY THE CPU, IT'S THE PIPELINE INSIDE THE CPU, MULTISTAGE. AT FIRST, WHILE THE OTHER IS STORED IN THE, QUOTE, PREFETCH BUFFER, AND I THINK WE ALL KNOW WHEN WE START SEEING EXCESSIVE USE OF QUOTATIONS AND I.E.'S, THAT THERE IS SOMETHING GOING ON, SUCH OTHER TEMPORARILY STORED THUMB INSTRUCTIONS NOT SUPPLIED TO THE CPU.

WELL, WAIT A MINUTE, IT'S ALREADY IN THE CPU. IT'S IN THE INSTRUCTION REGISTER. WE'VE ALREADY ACCOMPLISHED EVERYTHING THAT THIS CLAIM LIMITATION CALLS FOR IT. IT'S JUST SITTING THERE, AND NOW IT'S JUST LATCHED.

AND THEY SAY THE CPU, I.E. THE CORE. NO, NOT I.E. THE CORE.

CPU IS THE OVERALL CHIP IN THIS CASE. IT'S NOT THE CORE WHERE THERE'S, YOU KNOW, DEEP INTO THE ALU WHERE YOU'RE ACTUALLY GOING TO PROCESS.

SO THIS IS, THEY SAY, OH, WE GOT YOU BECAUSE NOW YOU'RE READING IT, YOUR INFRINGEMENT ARGUMENT LEADS TO THIS CLAIM CONSTRUCTION. LET'S JUST SET ASIDE THE EXTRINSIC EVIDENCE OF OUR INFRINGEMENT ARGUMENT AND RECOGNIZE THAT THE CLAIM ITSELF DOESN'T REQUIRE THE CONSTRUCTION THEY'RE ASKING FOR.

SO WE DON'T THINK THERE IS ANY GOOD AUTHORITY TO RECONSIDER. AND, IN FACT, YOU KNOW, IN THIS CASE, WE ALL COULD ASK FOR RECONSIDERATION IN TWEAKING OF EVERY CLAIM

CONSTRUCTION, BUT YOUR HONOR HAS REPEATEDLY INFORMED ALL OF US, AND OTHERS, YOU HAVE OTHER CASES ON THE DOCKET.

SO SOME THINGS ARE SETTLED. YOU CAN'T JUST ASK FOR MORE. YOU CAN'T JUST SAY HEY, WE WANT TO ARGUE AGAIN, BECAUSE WE'D LIKE A NEW AUDIENCE. THERE WAS NO CLEAR DISAVOWAL.

WHAT THEY'RE REALLY ARGUING, AND I'VE HEARD MORE OF THIS TODAY THAN WAS EXPECTED, IS THAT THEY REALLY HAVE A PROSECUTION HISTORY ESTOPPEL ARGUMENT. AND THOSE ARGUMENTS ARE DIFFERENT. AND THEY OPERATE UNDER A DIFFERENT LEGAL REGIME. THERE'S A LOT OF PROSECUTION HISTORY ESTOPPEL ARGUMENTS BEING FRAMED AS CLEAR DISAVOWALS.

CLEAR DISAVOWAL IS ACTUALLY A MUCH HIGHER STANDARD. THERE HAS TO BE NO AMBIGUITY WHATSOEVER.

IF THEY HAVE A PHE, A FESTO ARGUMENT, BRING IT. WE'LL DEAL WITH IT AT THE APPROPRIATE TIME. IT'S NOT A PROPER CLAIM CONSTRUCTION ARGUMENT.

THEY'RE CONFUSING I/O FETCH WITH PIPELINE EXECUTION. 112(F) SAYS YOU SHALL CONSTRUE IT IN A CERTAIN WAY. NOT YOU MAY, DEPENDING ON WHAT WAS SAID DURING THE PROSECUTION HISTORY. SO I DON'T KNOW THAT THERE'S ANY ABILITY -- YOU COULD SAY THE CLAIM IS INVALID. BUT I DON'T KNOW THAT YOU CAN SAY HEY, BASED ON PROSECUTION HISTORY, I CAN'T CONSTRUE IT TO COVER THAT THING.

AND WE THINK THE CLAIM WAS CLARIFIED SUFFICIENTLY.

THE COURT: CAN I ASK, IS IT AT THE END OF THE DAY

YOUR SUGGESTION ON THIS TERM SIMPLY, IN LIGHT OF THE AMENDMENT DURING RE-EXAMINATION, TO LEAVE IT UNCONSTRUED, TO RELY UPON A PLAIN AND ORDINARY MEANING?

MR. BAUM: YES. YES, THE PLAIN MEANING IS AS PLAIN AS COULD BE STATED.

THE OTHER ISSUE HERE, I DON'T KNOW IF THEY'RE GOING TO ARGUE THIS SEPARATELY OR NOT, THE "EXECUTE AT THE MAXIMUM FREQUENCY" BUT NEVER TOO FAST.

THE COURT: I THINK SO. IT'S A SEPARATE TERM. IT'S THE LAST TERM.

MR. BAUM: OKAY.

THE COURT: SO WE'LL TURN TO THAT.

ALL RIGHT. IF YOU ALL COULD JUST GIVE ME ONE MINUTE. MR. RIVERA?

(WHEREUPON, COURT CONFERS WITH CLERK.)

THE COURT: ALL RIGHT. I'M JUST TRYING TO SEQUENCE -- DO SOME SEQUENCING OF MY OWN. I'VE GOT, AS I SAID, SOME CRIMINAL MATTERS THAT REQUIRE MY ATTENTION.

BUT I THINK THE FAIREST AND BEST WAY TO MOVE FORWARD IS TO GET THIS LAST TERM DONE. AND THEN, AS SOME OF YOU MAY KNOW, IT'S MY STRONG PREFERENCE TO RENDER CONSTRUCTIONS AT THE CONCLUSION OF THE HEARING SO YOU ALL AT LEAST UNDERSTAND WHERE WE ARE AT. AND THEN RELY UPON THE DAYS AND WEEKS TO FOLLOW TO ACTUALLY DRAFT MY ORDER.

I WILL CONFESS, BASED ON SOME OF THE ARGUMENTS

ALREADY PRESENTED, I'M NOT COMFORTABLE DOING THAT IN THIS CASE. SO LET'S COMPLETE THE ARGUMENT.

I WILL LIKELY ISSUE MY RULINGS VERY QUICKLY SO THAT YOU ALL CAN PROCEED WITH EVERYTHING ELSE WE NEED TO DO TO GET THIS CASE READY FOR TRIAL.

BUT I'M NOT GOING TO BE IN A POSITION TO GIVE YOU CONSTRUCTIONS TODAY. IN CASE YOU'RE EXPECTING IT.

SO, LET'S TURN TO THE FINAL TERM.

MR: WEINSTEIN: YOUR HONOR, I ALSO HAVE A ONE MINUTE REBUTTAL ON THE LAST TERM.

THE COURT: YEAH, SURE.

MR. WEINSTEIN: THANK YOU, YOUR HONOR.

THERE'S REALLY ONLY TWO POINTS WE WANT TO MAKE, YOUR HONOR.

FIRST OF ALL, MR. BAUM'S ARGUMENT SEEMS TO BE MAKING ASSUMPTION THAT EVERYTHING ON THE SILICON, ON THE DIE IS PART OF THE CPU. THAT SIMPLY ISN'T THE CASE, YOUR HONOR. AND THE CLAIM LANGUAGE ITSELF MAKES THAT CLEAR.

I HAVE ON THIS SLIDE, AND MY COLLEAGUE, DR. CHEN, INFORMED ME THAT I SKIPPED OVER THIS SLIDE AND I SHOULDN'T HAVE, CLAIM 1 OF THE '749 ACTUALLY DEFINES A MICROPROCESSOR SYSTEM THAT COMPRISES A CENTRAL PROCESSING UNIT INTEGRATED CIRCUIT. AND THERE'S A NUMBER OF OTHER SUBCOMPONENTS OF THAT CPU INTEGRATED CIRCUIT.

AND THEN THE LATER PART OF IT TALKS ABOUT THE

MICROPROCESSOR SYSTEM COMPRISED IN INSTRUCTION REGISTER. SO THE MICROPROCESSOR SYSTEM IS ACTUALLY THE LARGER SYSTEM, NOT THE CPU SYSTEM.

AND SO THAT'S WHY WE HAVE IT DRAWN HERE AS THE CPU BEING SEPARATED FROM THE INSTRUCTION REGISTER. IS BASICALLY WHEN YOU'RE SUPPLYING THE MULTIPLE SEQUENTIAL INSTRUCTIONS, YOU'RE SUPPLYING THEM TO THE CPU. THAT'S THE CLAIM LANGUAGE WE'RE CONSTRUING.

THE CLAIM LANGUAGE THAT THEY'RE TALKING ABOUT LATER IN THE CLAIM IS TALKING ABOUT SUPPLYING THEM TO THE INSTRUCTION REGISTER, WHICH IS A SEPARATED COMPONENT. AND THAT'S WHY, ASIDE FROM JUST BEING A SUBSTEP OF THE OVERALL PROCESS, IT ACTUALLY DOESN'T ACHIEVE THE SUPPLYING OF THE INSTRUCTIONS TO THE CPU.

THE LAST ARGUMENT WAS JUST THAT, WHAT WE DIDN'T HEAR A LOT ABOUT WAS THIS, I DON'T THINK MR. BAUM REFERRED TO IT EVEN ONCE. I THINK HE SPENT MOST OF HIS TIME ON WHAT'S ADMITTEDLY THE EXTRINSIC ARGUMENT ABOUT THE INFRINGEMENT, WHICH WAS REALLY ONLY TO PROVIDE YOUR HONOR WITH THE BACKGROUND OF WHY THIS DISPUTE IS GERMANE TO THE INFRINGEMENT ISSUES.

AGAIN, IF YOU JUST LOOK AT THE LANGUAGE HERE, IT'S VERY DIFFICULT FOR MR. BAUM TO ARGUE, IN FACT I DIDN'T HEAR HIM ARGUE, THAT THIS LANGUAGE DIDN'T CONSTITUTE A DISCLAIMER.

THE COURT: WELL, I'M GLAD YOU CAME BACK TO THE LANGUAGE. BECAUSE THE CONCERN OR QUESTION I HAVE IS THE

CONSTRUCTION THAT'S BEING PROPOSED, I THINK, UNLESS I'M MISUNDERSTANDING IT, IS THAT, I EXCLUDE -- YEAH, MAYBE WE CAN GO BACK TO THIS.

SO IF YOU LOOK AT THE PLAINTIFFS' CONSTRUCTION, RIGHT, YOU'RE SAYING THAT IN ORDER TO MEET THIS LIMITATION YOU MAY NOT USE A PREFETCH BUFFER, AND THE REST THAT FOLLOWS, OKAY.

AND THEN YOU GO BACK TO THAT PROSECUTION HISTORY YOU WERE JUST SHOWING ME A MOMENT AGO.

THERE IT IS, YEAH. IT SAYS IT'S NOT SUFFICIENT TO MEET THAT LIMITATION. SO ARE THOSE TWO REALLY SAYING THE SAME THING?

MR. WEINSTEIN: YES, YOUR HONOR. THEY ARE.

WHAT THEY'RE SAYING IS THAT IT DOESN'T MEET THE CLAIM LANGUAGE.

THE COURT: IT'S NOT ENOUGH TO MEET THE CLAIM LANGUAGE. BUT IT DOESN'T NECESSARILY MEAN INCLUDING A PREFETCH BUFFER IS FATAL TO THAT OBJECTIVE, RIGHT?

MR. WEINSTEIN: WELL, INCLUDING A PREFETCH BUFFER ISN'T FATAL. WHAT'S FATAL IS USING A PREFETCH BUFFER THAT SUPPLIES THE INSTRUCTIONS ONE AT A TIME TO THE CPU.

IF YOU HAVE A PREFETCH BUFFER THAT'S DOING SOMETHING ELSE IN THE SYSTEM, THAT, I DON'T THINK OUR CONSTRUCTION IMPLICATES THAT.

IT'S NOT THE PRESENCE OF THE PREFETCH BUFFER THAT EXCLUDES IT.

THE COURT: IT'S YOUR EARLIER POINT YOU WERE MAKING.

MR. WEINSTEIN: YEAH. IT'S THE ONE-BY-ONE POINT.

AND JUST, LATER ON, JUST -- AND SO RIGHT HERE, ON THIS LAST POINT, YOU WERE ASKING, THE QUESTION IS IT SUFFICIENT OR IS IT EXCLUDED?

OVER HERE, WHEN THEY'RE TALKING ABOUT MACGREGOR, THEY TALK ABOUT ONE AT A TIME, SUCH NON-PARALLEL SUPPLYING OF INSTRUCTIONS IS NOT SUPPLYING THEM TO THE CPU. SO THEY'RE NOT EVEN SAYING IT'S NOT SUFFICIENT. THEY'RE SAYING THE ACT OF SUPPLYING THEM ONE AT A TIME IS NOT SUPPLYING THEM.

SO, AGAIN, ANOTHER CLEAR DISCLAIMER. AND OUR LANGUAGE IS BASICALLY SORT OF THE COMBINATION OF TWO OR THREE OF THE DISCLAIMERS PUT TOGETHER.

THE COURT: IF YOU'D GO BACK TO THE CONTRASTING CONSTRUCTIONS, THE DUELING CONSTRUCTIONS, I GUESS. THANK YOU.

IF I WERE INCLINED TO INCLUDE THE "ONE-BY-ONE" LANGUAGE IN THE PARENTHESIS THAT YOU HIGHLIGHTED, DO I REALLY NEED, AT THE END OF THE DAY, THE SECOND HIGHLIGHTED LANGUAGE?

MR. WEINSTEIN: I THINK YOU STILL DO, YOUR HONOR. BECAUSE THOSE, THE PREFETCH IN THE ONE INSTRUCTION ARE THE TWO SPECIFIC EMBODIMENTS THAT WERE EXPRESSLY DISCLAIMED.

IT MIGHT BE THAT, AS OPPOSED TO ONE-BY-ONE WOULD AUTOMATICALLY EXCLUDE THAT.

THE COURT: IT WOULD SEEM TO BE BROAD ENOUGH TO COVER BOTH OF THOSE PARTICULARS. BUT MAYBE I'M JUST MISREADING IT.

MR. WEINSTEIN: YEAH. I, I THINK THE VALUE OF THE WITHOUT CLAUSE IS THAT IT GIVES CLARITY IN WHAT HAS BEEN, IT'S ONE THING TO SAY ONE-BY-ONE, AND, YOU KNOW, MAYBE SOMEONE COULD COME BACK LATER AND SAY WELL, THIS PARTICULAR STRUCTURE DOESN'T DO IT ONE-BY-ONE.

I THINK THE SPECIFIC EXAMPLES THEY GAVE OF THE PREFETCH BUFFER AND THE ONE-INSTRUCTION-WIDE BUFFER, WHICH WERE FROM THE EDWARDS AND MACGREGOR REFERENCES, I THINK THOSE GIVE YOU A MUCH BETTER SENSE OF WHAT IT MEANS TO NOT GO ONE-BY-ONE.

SO I THINK, AS OPPOSED TO ONE-BY-ONE, I THINK THAT'S GOOD LANGUAGE. BUT I THINK YOU NEED THE REST OF IT TO JUST SORT OF MAKE CLEAR THE FULL SCOPE OF THE DISCLAIMERS.

I THINK THE BOTTOM LINE IS WITHOUT THE "WITHOUT" CLAUSE WE MAY HAVE A DISPUTE LATER ON THAT SOMEONE IS GOING TO TRY TO ARGUE THAT WHAT'S DESCRIBED IN THE LATTER HALF WAS ACTUALLY COVERED NONETHELESS.

THE COURT: OH, I'M PRETTY SURE I'LL HAVE A DISPUTE NO MATTER WHAT.

LET'S TURN TO THE LAST CLAIM TERM.

MR. WEINSTEIN: YES, YOUR HONOR.

I DON'T THINK WE NEED TO SPEND MUCH TIME ON THIS TERM BECAUSE I THINK MOST OF THE POINTS WE HAVE HERE WERE

COVERED VERY HEAVILY BY MS. KEEFE AND DR. WALKER.

AGAIN, I THINK THE ONLY DIFFERENCE BETWEEN THE CONSTRUCTION IS THAT OURS INCLUDES THE REQUIREMENT THAT THE CPU EXECUTE AT ITS MAXIMUM FREQUENCY POSSIBLE.

WE WENT THROUGH THIS BEFORE. I WON'T GO OVER THIS IN TOO MUCH DETAIL. AGAIN, WHAT, WHAT THEY'RE TALKING ABOUT THE PRIOR ART IS FIXING THE CLOCK SPEED AT A RATED SPEED IN ORDER TO ACCOMMODATE WORST CASE SCENARIOS. AND AS MR. WALKER MENTIONED EARLIER TODAY, THE RESULT IS THAT YOU'LL LEAVE AN AWFUL LOT ON THE TABLE IN TERMS OF PROCESSING POWER BECAUSE YOU'RE ALWAYS CLOCKING SOMETHING FOR THE WORST CASE SCENARIO.

SO WHAT HAPPENS IN THE SPECIFICATION IS, AND I KNOW WE PROBABLY QUOTED THIS EARLIER, IS THAT YOU END UP WITH A TRADITIONAL CPU DESIGN WHERE YOU'RE CLOCKING IT AT A FACTOR TWO OR MORE SLOWER THAN MAXIMUM THEORETICAL PERFORMANCE. AGAIN, FOR THIS WORST CASE SCENARIO.

AND AS WAS DISCUSSED IN LENGTH THIS MORNING, WE HAVE A VARIABLE SPEED CLOCK THAT DEALS WITH THAT. IT SITS ON THE SAME INTEGRATED CIRCUIT AND IT LET'S THE CLOCK'S FREQUENCY VARY WITH THE VARIOUS PARAMETER CHANGES.

NOW, I THINK WHAT, THE SPECIFICATION OF THE '336, LIKE ALL THESE PATENTS HERE WITH SIMILAR SPECIFICATION, IT'S AN UNUSUAL SPECIFICATION IN THAT IT HAS A LOT OF THIS KIND OF MUST ALWAYS MAGIC. IT HAS A LOT OF ABSOLUTIST LANGUAGE. IF YOU LOOK AT THE BEGINNING OF THE WRITTEN DESCRIPTION, IT SAYS

"DESCRIPTION, DETAILED DESCRIPTION OF THE INVENTION." THE WORD "PREFERRED" EMBODIMENT DOESN'T APPEAR ANYWHERE IN THE SPECIFICATION.

THIS IS A VERY ABSOLUTIST SPECIFICATION. IT DRAWS CLEAR DISTINCTIONS BETWEEN THE PRIOR ART. AND IT DESCRIBES THE EMBODIMENT IN SORT OF ACTIVE ABSOLUTIST TERMS. AND WE SAW THAT WITH MR. CHEN'S DISCUSSION OF THE INSTRUCTION REGISTER.

IN THIS CASE, THE SPECIFICATION TALKS ABOUT, AFTER DESCRIBING ALL THE BENEFITS OF USING THIS RING OSCILLATOR, IT SAYS "BY DERIVING THE SYSTEM'S TIMING FROM THE RING OSCILLATOR THE CPU WILL ALWAYS EXECUTE AT THE MAXIMUM FREQUENCY POSSIBLE AND NEVER TOO FAST." AND THERE'S ADDITIONAL STATEMENTS LIKE THIS LATER ON IN COLUMN 17.

THE COURT: WHAT AM TO MAKE OF THIS? BECAUSE I DO THINK THAT IT HAS SOME IMPLICATIONS FOR YOUR EARLIER ARGUMENT, RIGHT.

THIS IS, UP UNTIL THIS POINT I HAD THOUGHT I FINALLY UNDERSTOOD SOMEWHAT CLEARLY THAT THE GOAL HERE WAS TO LET IT RIDE, THAT IS TO LET THE OSCILLATOR ACHIEVE THE MAXIMUM FREQUENCY POSSIBLE CONSTRAINED ONLY BY THE VARIABLES IN THE ENVIRONMENT.

AND YET WHEN I READ COLUMN 16, I GUESS IT IS, IT SEEMS TO SUGGEST THERE'S SOME HIGH-END COUPLER, OR SOMETHING WHICH WOULD PRECLUDE IT FROM GETTING SO FAST THAT IT WOULD BE -- WHATEVER TOO FAST MEANS. SO HOW DO I SQUARE ALL THAT?

MR. WEINSTEIN: WELL, THE RING OSCILLATOR IS GOING TO, BECAUSE THEY'RE OPERATING ON THE SAME DIE, YOU'RE ALWAYS GOING TO HAVE SORT OF A, YOU'RE GOING TO HAVE A VARIABILITY THAT'S GOING TO BE MATCHED BETWEEN THE TWO COMPONENTS.

AND SO, I GUESS TO ANSWER YOUR QUESTION, WHEN YOU -- SO YOUR QUESTION IS TALKING ABOUT IF YOU GET TO A POINT WHERE YOU'RE OPERATING TOO FAST? IS THAT WHAT YOU'RE TALKING ABOUT?

THE COURT: YEAH. BECAUSE THIS SEEMS TO BE TELLING ME THAT MAXIMUM FREQUENCY IS NOT, IS NOT THE END, BE-ALL AND END-ALL HERE. AT LEAST IN CERTAIN CIRCUMSTANCES THE CPU IS GOING TO BE PRECLUDED FROM ACHIEVING ITS MAXIMUM FREQUENCY BECAUSE ABOVE OR BEYOND A CERTAIN POINT IT'S TOO FAST.

SO HOW DO I UNDERSTAND THAT.

MR. WEINSTEIN: WELL, THE CLOCK WILL INHERENTLY KNOW WHAT'S GOING TOO FAST FOR THE CPU BY JUST ITS GENERAL DESIGN. SO IT'S JUST, THE DESIGN OF THE OSCILLATOR IS GOING TO OSCILLATE AT A FREQUENCY THAT'S GOING TO VARY. BUT IT'S NOT GOING TO GO TOO FAST. JUST IF YOU ALLOW IT TO FLOW, IT KNOWS ITS MAXIMUM FREQUENCY.

THE COURT: SO IN SOME WAYS, LET ME JUST BE, UNDOUBTEDLY I'M BEING IMPRECISE HERE, WHEN IT TALKS ABOUT THE CPU EXECUTING "NEVER TOO FAST" IN SOME WAYS THAT'S REDUNDANT OF "MAXIMUM FREQUENCY POSSIBLE" BECAUSE IT'S NEVER POSSIBLE TO GO ABOVE THE MAXIMUM FREQUENCY, RIGHT?

MR. WEINSTEIN: EXACTLY, YOUR HONOR.

AND JUST TO BE CLEAR, ON THIS CONSTRUCTION, WE WOULD BE OKAY WITH REMOVING THE "NEVER TOO FAST" LANGUAGE. BECAUSE IT IS, AGAIN, REDUNDANT OF WHAT WE HAD ON, WITH THE "MAXIMUM FREQUENCY POSSIBLE."

THE COURT: OKAY.

MR. WEINSTEIN: I WON'T GO THROUGH THE LAW. BASICALLY THIS IS, WE'RE ARGUING THIS IS AN EXAMPLE OF WHERE YOU'RE DOING TWO THINGS, YOU'RE CRITICIZING THE PRIOR ART, AND YOU'RE MAKING AN EMPHATIC STATEMENT ABOUT A FEATURE OF YOUR INVENTION.

AND SORT OF, THOSE IMPLICATE SORT OF TWO OF THE DIFFERENT RATIONALES UNDER THE EDWARDS CASE FOR WHY YOU CAN TAKE A TERM IN A PATENT CLAIM THAT MAYBE SORT OF BROADER AND READ IN LIGHT OF THE SPECIFICATION TO COME UP WITH SOMETHING NARROWER.

BUT IT DOESN'T STOP WITH THE SPECIFICATION. IT ALSO GOES INTO THE FILE HISTORY. THIS IS A EXAMPLE OF THE FILE HISTORY, OF THE '336, THE ORIGINAL FILE HISTORY, WHERE THEY WERE DISTINGUISHING THE SHEETS REFERENCE. AND THEY WERE TALKING ABOUT VARIOUS ASPECTS OF THE INVENTION, AND HOW THEY WERE DISTINGUISHABLE FROM SHEETS.

AND THEY ACTUALLY, LOOKS LIKE BLOCK QUOTED PORTIONS OF THE SPECIFICATION THAT SAID, "THE CPU 70 EXECUTES AT THE FASTEST SPEED POSSIBLE USING THE ADAPTIVE RING COUNTER 430."

AND AGAIN, THEY'RE TALKING ABOUT, "THE SPEED MAY VARY BY A FACTOR OF FOUR DEPENDING UPON TEMPERATURE, VOLTAGE, AND PROCESS."

AND THE LAST LINE SAYS "EITHER OF THESE ASPECTS OF THE PRESENT INVENTION ARE SUGGESTED BY SHEETS." SO NOT ONLY DO YOU HAVE THE STATEMENT THAT THE CPU WILL ALWAYS EXECUTE AT THE FASTEST FREQUENCY POSSIBLE, BUT THIS WAS ACTUALLY A FEATURE THAT WAS RELIED UPON DURING THE PROSECUTION.

IT GOES ON, IN A LATER AMENDMENT DURING THE SAME PROSECUTION, THEY TALKED ABOUT THE FACT, AND THE USED THE WORD THE "PRESENT" INVENTION. AND THERE, WE CITED THE CASES IN OUR BRIEF THAT SAY WHEN YOU TALK ABOUT SOMETHING AS THE PRESENT INVENTION IT'S A LITTLE BIT MORE WEIGHT THAN IF YOU'RE JUST TALKING ABOUT SOMETHING IN GENERAL.

AND THEY'RE TALKING ABOUT, AGAIN, THE CLOCK FREQUENCY VARYING BASED ON THE OPERATING CHARACTERISTICS. IT SAYS, "THIS ALLOWS THE MICROPROCESSOR TO OPERATE AT ITS FASTEST SAFE OPERATING SPEED, GIVEN ITS MANUFACTURING PROCESS OR CHANGES IN ITS OPERATING TEMPERATURE OR VOLTAGE. IN CONTRAST, PRIOR ART MICROPROCESSOR SYSTEMS ARE GIVEN A RATED SPEED BASED ON POSSIBLE WORST CASE OPERATING CONDITIONS."

SO, AGAIN, IT'S NOT DIFFERENT FROM WHAT IS ACTUALLY THERE ALREADY IN THE SPECIFICATION, BUT WHAT IT IS IS GIVING YOU ANOTHER BASIS IN THE FILE HISTORY TO STRENGTHEN WHAT'S ALREADY IN THE SPECIFICATION. THAT THIS IS ACTUALLY WHAT THEY

WERE USING TO DISTINGUISH THE INVENTION DURING THE ORIGINAL PROSECUTION.

NOW, ONE OF THE DISPUTES THAT CAME UP IN THE BRIEFING WAS, WELL, ISN'T IT GOOD ENOUGH TO JUST SAY THAT THE CLOCKING IS CAPABLE OF GOING AT THE MAXIMUM SPEED POSSIBLE?

THE COURT: RIGHT.

MR. WEINSTEIN: IT DOESN'T ALWAYS HAVE TO GO THERE. IT'S ONLY CAPABLE.

THE FLAW WITH THE ARGUMENT IS THAT IT'S GOING TO BE SATISFIED BY THE PRIOR ART. IF YOU LOOK AT THE EXCERPTS IN THE FILE HISTORY, THEY'RE TALKING ABOUT WORST CASE CONDITIONS, IT'S GOING TO BE GIVEN A RATED SPEED.

SO YOU'RE GOING TO BE OPERATING AT THE MAXIMUM SPEED POSSIBLE AT THE WORST CASE CONDITIONS. SO IF YOU'RE ONLY TALKING ABOUT A MERE CAPABILITY, THEN YOU'RE GOING TO BE READING RIGHT BACK ON THE PRIOR ART THAT THEY WERE DISTINGUISHING BOTH IN THE SPECIFICATION AND THE FILE HISTORY.

I THINK THAT'S ALL I HAVE FOR THIS TERM.

THE COURT: ALL RIGHT. THANK YOU VERY MUCH.

MR. WEINSTEIN: THANK YOU.

THE COURT: MR. BAUM, MR. OTTESON, WHO'S GOING TO TAKE THE LAST TERM?

MR. OTTESON: LAST TIME, YOUR HONOR. I PROMISE.

THE COURT: OKAY.

MR. OTTESON: OKAY. SO, PLAINTIFFS HAVE AT LEAST,

THIS ONE "BUT NEVER TOO FAST" I WAS JUST IMAGINING HOW YOU INSTRUCT THE JURY. WELL, YOU KNOW, THERE'S NO INFRINGEMENT IF IT'S TOO FAST.

BUT I DON'T THINK THAT SOLVES THE PROBLEM HERE. THAT, WHAT IS THE MAXIMUM FREQUENCY POSSIBLE? IF, IF IT COULD GO FASTER THEN YOU DON'T INFRINGE, AND HOW DO YOU TELL -- HOW DOES ANYONE KNOW WHAT THAT IS?

WHICH IS WHY TWO JUDGES HAVE ALREADY SAID NO, TO THIS SAME ARGUMENT.

IT WOULD BE A DIFFICULT PATENT SYSTEM, INDEED, IF YOU COULD JUST KEEP GOING DOWN THE LINE AND FIND YOUR THIRD JUDGE WHO MIGHT DISAGREE. SO THERE IS SOMETHING TO BE SAID FOR THE FACT THAT WE ALREADY HAVE OPINIONS ON THIS PARTICULAR ISSUE.

THE COURT: AT LEAST AS TO THIS TERM.

MR. OTTESON: YES. AND, YOUR HONOR CAN OBVIOUSLY DO WHAT THE RIGHT THING IS.

THE COURT: YEAH.

MR. OTTESON: BUT LET'S GIVE SOME CREDENCE TO THE THOUGHT THAT'S ALREADY BEEN PUT INTO THIS ISSUE.

THE COURT: I AGREE.

MR. OTTESON: BY THE WAY, ONE THING THAT I THINK I WOULD DISAGREE WITH THAT COUNSEL SAID IS THAT, YOUR HONOR POINTED OUT, IS THAT THERE IS CONTROL. THE PATENT DOES DESCRIBE CONTROL, AND NOT SOME UNCONTROLLED OSCILLATOR.

IN FACT, IN THE COLUMN THAT YOUR HONOR MENTIONED, IN 16, THERE'S CONTROL VIA VOLTAGE. SO -- WHICH GOES BACK TO OUR QUESTION OF THIS UNCONTROLLABILITY. IF IT'S SUPPOSED TO BE UNCONTROLLABLE, AND YET THE PATENT SPECIFICATION EXPRESSLY SAYS VOLTAGE IS ONE OF THE WAYS TO CONTROL IT, TO CALL IT UNCONTROLLABLE CLEARLY WOULD BE AN INCORRECT CONSTRUCTION.

BUT IT ALSO RECOGNIZES YOU DON'T WANT CONTROL IF PLAINTIFF'S CLAIM CONSTRUCTION WAS ADOPTED BECAUSE CONTROL WOULD JUST BE TURN IT TO 11, AND LET IT RUN. AND THAT'S ALSO INCONSISTENT WITH IDEA THAT YOU HAVE VOLTAGE CONTROL AS POINTED OUT IN COLUMN 16 OF -- ACTUALLY, OF ALL THE PATENTS.

SO, THE AMENDMENT, THE PLAINTIFFS RELY ON THIS AMENDMENT IN VIEW OF SHEETS. AND THEY PLACE HEAVY EMPHASIS AND LOTS OF UNDERLINING AND AN ADDITION OF PUNCTUATION MARKS. BUT LET'S DEAL WITH EXACTLY WHAT WE WERE TALKING ABOUT WHEN WE AMENDED IN VIEW OF SHEETS.

SPECIFICALLY, WE POINTED OUT THAT WE WERE AMENDING THE CLAIM TO ADD TWO NEW THINGS. ONE, THAT THE RING OSCILLATOR, MICROPROCESSOR ARE ON THE SAME INTEGRATED CIRCUIT. OKAY, WE'VE TALKED THAT. THE CLOCK IS ON-CHIP.

A SECOND THING, MOREOVER, THAT THEY WOULD THEN VARY AS A RESULT OF PROCESS, OR VOLTAGE, ET CETERA, BECAUSE THEY'RE ON THE SAME SILICON.

AND THEN WE SAID NEITHER OF THESE ASPECTS, NEITHER ONE NOR TWO, ARE SUGGESTED BY SHEETS.

THIS PART IS, AGAIN, THESE OBJECTS OF THE INVENTION, WHICH ARE GO AS FAST AS POSSIBLE, LOOK, WHEN YOU'RE A PATENT APPLICANT YOU TOUT THE BENEFITS OF YOUR INVENTION. YOU SAY HEY, NOW WE CAN OPERATE FASTER. NO ONE IS DISPUTING THAT THIS DOES ALLOW YOU TO GO FASTER.

IF THEY DON'T GO FASTER, IF THEY ACTUALLY GO BELOW THE SPEED OF I/O, MAYBE THEY WOULD HAVE AN ARGUMENT THAT HEY, WE'RE NOT USING MR. MOORE'S TECHNOLOGY BECAUSE OUR PROCESSOR GOES WELL BELOW OUR I/O SPEED. BUT THAT'S NOT THE CASE AND EVERYONE KNOWS IT.

SO THIS IS JUST ANOTHER BENEFITS OF THE INVENTION, JUST LIKE IN PHILLIPS AWH. AND SURE ENOUGH, WE AMENDED OUR CLAIM TO ADD THAT, THOSE TWO ELEMENTS, THAT HAD TO BE ON THE SAME INTEGRATED CIRCUIT AND HAD TO VARY SIMILARLY.

AND, FINALLY, THE POINT THAT THEY RELY ON, WHERE WE TALK ABOUT DOING THIS ALLOWS THE MICROPROCESSOR TO OPERATE AT A FASTER, SAFER SPEED; ALLOWS DOESN'T MEAN REQUIRES. AND I THINK WE'VE ALREADY DISCUSSED THAT.

SO, UNLESS THERE ARE OTHER ISSUES?

THE COURT: NO. I THANK YOU FOR YOUR ARGUMENT, MR. BAUM.

ANY BRIEF REBUTTAL, MR. WEINSTEIN?

MR. WEINSTEIN: JUST ONE, YOUR HONOR.

I JUST WANTED TO CLARIFY SOMETHING THAT MR. BAUM SAID A FEW MINUTES AGO. HE TALKED ABOUT THERE BEING CONTROL IN

THE SPECIFICATION, AND HE POINTED TO THE PASSAGE AT COLUMN 16. I JUST WANT TO MAKE SURE THE RECORD IS CLEAR.

THEY'RE NOT TALKING ABOUT CONTROL. THE SENTENCE HE'S REFERRING TO IS THE RING OSCILLATOR FREQUENCY IS DETERMINED BY THE PARAMETERS OF TEMPERATURE, VOLTAGE AND PROCESS.

AND THEN THEY TALK ABOUT HOW AT ROOM TEMPERATURE IT CAN OSCILLATE AT DIFFERENT THINGS. SO WHAT THEY'RE TALKING ABOUT HERE IS IF YOU'RE GOING TO LET THE RING OSCILLATOR RUN FREE, AND BECAUSE IT'S MADE OF THE SAME TRANSISTORS, IT'S GOING TO NATURALLY RUN AT THE CPU'S FASTEST RATE. THIS IS NOT TALKING ABOUT CONTROL LIKE WE TALKED ABOUT EARLIER. THIS IS JUST TALKING ABOUT VARYING BASED ON THE ENVIRONMENT.

THE LAST POINT, YOUR HONOR --

THE COURT: I'M SORRY, BEFORE YOU GOT TO YOUR LAST POINT, LET ME MAKE ONE FURTHER POINT OF MY OWN, OR ASK A QUESTION, I GUESS.

SO, YOU ALL HAVE NOW MADE VERY CLEAR TO ME THAT AN IMPORTANT CONSIDERATION OF THIS INVENTION IS THE NOTION THAT ENVIRONMENTAL FACTORS ARE GOING TO DRIVE CLOCK SPEED OR OSCILLATION. BUT, IS IT THE SAME THING TO SAY THAT THE CLOCK SPEED IS BEING DRIVEN BY THOSE ENVIRONMENTAL FACTORS AS TO SAY THAT BY DEFINITION THEN THE CLOCK SPEED IS OPERATING AT PEAK OR MAXIMUM EFFICIENCY?

MR. WEINSTEIN: I THINK THEY'RE RELATED POINTS. I

THINK THEY ARE DISTINCT POINTS THOUGH. BECAUSE THEY ARE DISTINCT IN THAT REGARD.

THE COURT: YEAH.

MR. WEINSTEIN: BUT, I THINK THEY BOTH FLOW FROM THE SPECIFICATION. BECAUSE YOU BOTH HAVE SORT OF THE VARIANCE BASED ON THE ENVIRONMENTAL PARAMETERS. AND YOU HAVE, THE PATENT DESCRIBES AS THE CONSEQUENCE AND BENEFIT OF THAT IS THAT YOU'RE RUNNING AT THE FASTEST POSSIBLE SPEED.

BUT THEY ARE, I AGREE, THEY ARE TWO DISTINCT CONCEPTS.

THE LAST --

THE COURT: THE LAST POINT.

MR. WEINSTEIN: YEAH, THE LAST POINT WE HAVE IS JUST, ABOUT JUDGE WARD'S CONSTRUCTION.

THE PORTION OF THE CLAIM CONSTRUCTION ORDER THAT THEY'RE TALKING ABOUT WAS WHERE HE WAS TALKING ABOUT A DIFFERENT PART OF THE CLAIM LANGUAGE, IT WAS THE OSCILLATOR CLOCKING. AND WHAT, THE DISPUTE THERE HAD NOTHING TO DO WITH HOW FAST OR WHETHER YOU HAVE TO ACHIEVE MAXIMUM SPEED.

WHAT THEY WERE TALKING ABOUT THERE WAS DOES THE RING OSCILLATOR HAVE TO ORIGINATE THE CLOCK SIGNAL AS OPPOSED TO NOT? THEY WERE TALKING ABOUT MORE THE ORIGINATION OF THE CLOCK SIGNAL, AND NOT THE SPEED AT WHICH IT GENERATES THE CLOCK SIGNAL.

SO, AGAIN, THE ISSUE WAS NOT ADDRESSED AT ALL BY

JUDGE WARD'S CONSTRUCTION.

THE COURT: ALL RIGHT.

MR. BAUM: THANK YOU, YOUR HONOR.

THE COURT: THANK YOU, MR. WEINSTEIN.

THANK YOU ALL FOR YOUR ARGUMENTS.

COUNSEL, AS I THINK THROUGH HOW WE CAN WRAP THINGS UP FOR TODAY AND MOVE FORWARD, WITH YOUR INDULGENCE, I'D LIKE TO STAND IN RECESS, BRIEFLY.

I'LL THEN -- OBVIOUSLY I HAVE TO TURN TO MY CRIMINAL CALENDAR.

BEFORE I TURN TO MY CRIMINAL CALENDAR, I'M GOING TO BE IN A POSITION TO RENDER MY CONSTRUCTIONS. SO IF YOU CAN JUST GIVE ME A FEW MOMENTS TO GATHER MY NOTES UP, I'D LIKE TO GIVE YOU THOSE TODAY. I THINK YOU'RE ENTITLED TO THAT.

SO WE'LL STAND IN RECESS. WHEN WE COME BACK, I'LL GIVE YOU CONSTRUCTIONS AND THEN I'LL WISH YOU ALL A GOOD AFTERNOON.

(WHEREUPON, BRIEF BREAK WAS HAD.)

THE COURT: AS I MENTIONED BEFORE WE BROKE, I AM PREPARED AT THIS TIME TO RENDER CONSTRUCTION OF THE FIVE TERMS THAT ARE IN DISPUTE.

LET ME JUST UNDERSCORE HOW I WOULD PROPOSE TO PROCEED. YOU WILL HAVE THE CONSTRUCTIONS HERE ON THE RECORD. I SUSPECT YOU ALL WILL BE GETTING TRANSCRIPTS AS NEEDED. AND AT SOME POINT IN THE NEAR FUTURE I WILL ISSUE A FULL CLAIM

CONSTRUCTION ORDER LAYING OUT ALL THE REASONS BEHIND MY DECISION, AND CERTAINLY REASONING I HOPE THAT WILL WITHSTAND ANY FURTHER SCRUTINY BY ANY FURTHER COURT.

BUT I DO THINK IT'S IMPORTANT THAT THE PARTIES UNDERSTAND WHERE WE STAND, AND PROCEED WITH EXPERT DISCOVERY, SUMMARY JUDGMENT AND THE LIKE WITH THAT CERTAINTY IN MIND.

FINAL POINT, AS I'M WRITING THE ORDER, I CERTAINLY WILL RESERVE THE RIGHT TO TWEAK OR CHANGE AS SOME GREAT INSIGHT COMES TO ME, BUT I HAVEN'T DONE IT YET. AND I GENERALLY TEND TO STICK TO THE CONSTRUCTION AS I'VE ADOPTED IN THIS FASHION.

SO WITH THAT INTRODUCTION IN MIND, LET'S TURN TO THE CLAIM TERMS IN DISPUTE.

THE FIRST CLAIM TERM IN DISPUTE IS "RING OSCILLATOR." RING OSCILLATOR SHALL BE CONSTRUED AS FOLLOWS: AN OSCILLATOR HAVING A MULTIPLE, ODD NUMBER OF INVERSIONS ARRANGED IN A LOOP, WHEREIN THE OSCILLATOR IS VARIABLE BASED ON TEMPERATURE, VOLTAGE, AND PROCESS PARAMETERS IN THE ENVIRONMENT.

THE SECOND TERM FOR CONSTRUCTION IS "INSTRUCTION REGISTER." AN INSTRUCTION REGISTER SHALL BE CONSTRUED AS FOLLOWS: A REGISTER THAT RECEIVES AND HOLDS ONE OR MORE INSTRUCTIONS FOR SUPPLYING TO CIRCUITS THAT INTERPRET THE INSTRUCTIONS.

THE THIRD TERM FOR CONSTRUCTION IS "SEPARATE DIRECT MEMORY ACCESS CENTRAL PROCESSING UNIT." THIS TERM SHALL BE

CONSTRUED AS FOLLOWS: A CENTRAL PROCESSING UNIT THAT ACCESSES MEMORY AND THAT FETCHES AND EXECUTES INSTRUCTIONS DIRECTLY AND SEPARATELY FROM THE MAIN CENTRAL PROCESSING UNIT.

THE FOURTH TERM FOR CONSTRUCTION IS "SUPPLY THE MULTIPLE SEQUENTIAL INSTRUCTIONS TO SAID CENTRAL PROCESSING UNIT INTEGRATED CIRCUIT DURING A SINGLE MEMORY CYCLE." THIS TERM SHALL BE CONSTRUED AS FOLLOWS: PROVIDE THE MULTIPLE SEQUENTIAL INSTRUCTIONS IN PARALLEL, PARENTHESIS, AS OPPOSED TO ONE-BY-ONE, CLOSED PARENTHESIS, TO SAID CENTRAL PROCESSING UNIT INTEGRATED CIRCUIT DURING A SINGLE MEMORY CYCLE.

THE FIFTH TERM FOR CONSTRUCTION IS "CLOCKING SAID CENTRAL PROCESSING UNIT." THIS TERM SHALL BE CONSTRUED AS FOLLOWS: PROVIDING A TIMING SIGNAL TO SAID CENTRAL PROCESSING UNIT.

ALL RIGHT, COUNSEL. WITH THAT, I WILL THANK YOU ALL FOR YOUR PRESENTATIONS THIS AFTERNOON AND WISH YOU ALL A GOOD WEEKEND.

(COLLECTIVE THANK YOU HEARD FROM COUNSEL.)

(WHEREUPON, PROCEEDINGS WERE CONCLUDED.)

--OOO--

CERTIFICATE OF REPORTER

I, GEORGINA GALVAN COLIN, PRO TEM COURT REPORTER FOR THE UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF CALIFORNIA, 280 SOUTH FIRST STREET, SAN JOSE, CALIFORNIA, DO HEREBY CERTIFY:

THAT THE FOREGOING TRANSCRIPT IS A FULL, TRUE AND CORRECT TRANSCRIPT OF THE PROCEEDING HAD IN CASE NUMBERS CV-08-00877 PSG AND CV-08-00882 PSG, DATED NOVEMBER 30, 2012, THAT I REPORTED THE SAME IN STENOTYPE TO THE BEST OF MY ABILITY, AND THEREAFTER HAD THE SAME TRANSCRIBED BY COMPUTER-AIDED TRANSCRIPTION AS HEREIN APPEARS.

DATED: DECEMBER 10, 2012

/S/

GEORGINA GALVAN COLIN, CSR
LICENSE NUMBER 10723